COMMERCIAL CAR JOURNAL

APRIL 1960 .

THE MAGAZINE OF FLEET MANAGEMENT

A CHILTON PUBLICATION

24th Fleet Reference Annual for 60

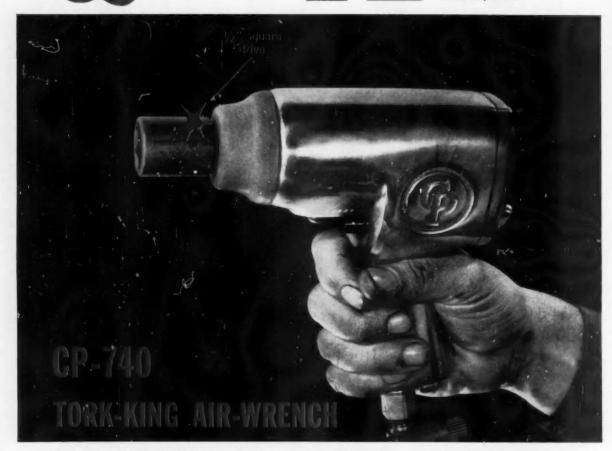
QUESTIONS AND ANSWERS ABOUT A REAL MONEY-MAKER



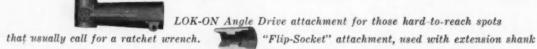
- 1. Who makes it?
- 2. Capacity?
- 3. Name and model?
- 4. What's the most important feature?
- 5. Power controllable?
- 6. Will it run on my shop air line?
- 7. How about maintenance?



- 1. Chicago Pneumatic Tool Co.
- 2. Adjustable torque; up to ½" bolt size.
- 3. TORK-KING, CP-740
- More work-output than any comparable air-wrench . . . keeps initial wallop after years of rough, hard use.
- For sure . . . CP pioneered this feature as early as 1939.
- 6. Yes, it's rated at 4 cfm . . . will do a swell job on 80 psi . . . a real air economizer . . . uses about the same as a grease gun.
- 7. Practically none . . . Warranty Records prove it.



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model, gives you the right wheel socket instantly ... has 3/4" hex on one end, 13/16" hex

on the other end and 1/2" square drive in the middle. One end or the other must fit.

Chicago Pneumatic & East 44th Street, New York 17, N. Y.

AIR AND ELECTRIC IMPACT WRENCHES . BEAD BREAKERS . ZIP-GUNS . PNEU-DRAULIC TRUCK JACKS AND PUMPS



"OUR AVERAGE RING MILEAGE IS NOW UP TO 291,302..."

"We rebuild our engines only with Pedrick Rings," states Mr. Vernon F. Evers, Maintenance Superintendent. United Shipping Co. and Red Truck Line, Inc., of Minneapolis, Minn., who operate over 400 units, including 100 heavy-duty tractortrucks in interstate hauling between Minneapolis, Fargo and Chicago. "On our diesel engine overhauls, we use the ring that assures us trouble-free ring mileage and low oil consumption for more than 200,000 miles between overhauls. Our average now is up to 291,302 miles on a set of rings. In



Vernon F. Evers, Maintenance Superintendent, United Shipping Co. and Red Truck Line, Inc., 2601 Broadway Rd., N. E., Minneapolis, Minn.

view of this, we feel that Pedrick is the ring to do the job."

It does not matter what kind of vehicles are in your fleet, nor what kind of service—Pedrick Formflex Chrome Ring Sets are all-purpose. If you want the best in oil and fuel economy, power, dependability and long life from your piston rings, then always use Pedrick Formflex.

DEPEND ON



COMMERCIAL CAR JOURNAL

CCJ

THE MAGAZINE OF FLEET MANAGEMENT

A CHILTON PUBLICATION

APRIL 1960

VOL. 99 NO. 2



1960 FLEET REFERENCE ANNUAL

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1 MAINTENANCE

SEE PAGE 95

SERVICE DATA for all current production trucks, buses, engines and fleet passenger cars. Each make is complete and all in one place

SECTION

2 STATISTICS

SEE PAGE 255

QUICK REFERENCE facts on trucks, buses, trailers, plus truck tonnage and passenger travel—a CCJ exclusive for fleetmen who need the facts

SECTION

3 OPERATION

SEE PAGE 273

MOST UP-TO-DATE listing available of state size and weight limits, safety equipment requirements, vehicle inspection, mud guard laws, and state taxes

SECTION

4 SELECTION

SEE PAGE 305

SPECIFICATIONS on current production trucks, buses, engines, transmissions, third axles and spark plugs to help you in selecting equipment

SECTION

5 TRAINING

SEE PAGE 337

FULLY REVISED for 1960, CCJ's lists of maintenance manuals and training films have been selected and verified to give you the latest available training aids

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THIS YEAR'S Fleet Reference Annual is indexed with edge-of-page markers (similar to those above). They make each section easier to locate. By riffling through the issue, you'll be able to spot each section number in color on the outer edge of the pages listing the contents of the section.

IN THIS ISSUE . . .

COMMERCIAL CAR JOUR-NAL'S 24th consecutive Fleet Reference Annual—with more useful fleet data than any other publication—is divided into five sections (indexed at left) so everything is easier to find. There's no jumping around to find what you want.



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BPA

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"OVER 7 MILLION MILES of ACCURATE and SATISFACTORY SERVICE . . ."

Reports Ryder Truck Rental, Inc., Division of Ryder System, Inc.

The ENGLER Hubodometer



- Field tested by
 10 years of service
- · Easy to read
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- · Universally accepted
- · Completely sealed

Originated and developed by ENGLER to aid fleet operators for: interchange of equipment, leasing and rentals, warranty programs, tire mileage, preventive maintenance, ton-mile regulations.

We congratulate Ryder on their excellent services and highway safety program.

We are proud of the role that we have played in contributing to the overall success of this leading fleet.

The above comments are typical of leading fleets who rely on ENGLER—there is an ENGLER instrument that can be specifically adapted to your fleet needs.

Other ENGLER Precision Recording Instruments VDO Tachograph



A recording Speedometer that provides a "Trip Resume"

- · Indicates Speed, Distance, Time
- Records Speed at Any Moment, Distance Covered, Stop and Ge Periods.
 For uninterrupted periods up to 7 complete days.

 Warns When Pre-Adjusted Speed is Reached.



DC Hour Meter

Electrically registers hours and minutes of any engine operation. For use on materials handling equipment, tractors, road graders, trucks, pumps, etc.

BC Hour Meter

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Dept. MH-11 Instrument Co. 250 Culver Avenue, Jersey City, N. J. Phone HEnderson 4-6500 Better products, faster, from your Bearing Distributor:



Over 50 years of BCA know-how pays off in bonus miles on the road



BCA's long-time experience gives you bearings that insure long, trouble-free service!

Maintenance cost is a vital factor in any fleet operation. Rigs must keep rolling to bring profits. That's why it is so important to use only the finest bearings for all replacements. And BCA has been the first choice of skilled mechanics for all ball bearing replacements.

Perfect quality control of BCA starts in the steel, is followed through in design and manufacturing. An important plus value is the high availability of BCA bearings. If you want to be sure of every service job, don't take chances with worn or pitted bearings—replace with new BCA. You save costly delays and stretch overhaul periods substantially when you insist on BCA ball bearings.

Get all the facts on how you can save time and money the BCA way. Call your BCA jobber today.

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DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC. • DETROIT 13, MICHIGAN





EDITORIAL COMMENT

PLAY BALL!

REG-BALL" may top baseball this season as the national sport. There are three teams in the "reg-ball" league—fleet operators, manufacturing suppliers and the Interstate Commerce Commission. They all play in the same game and there is no umpire in the park. You have to unwind a lot of red tape to get a court decision on a close play.

With this set up, it's only natural that "regball" is often confusing, sometimes ruffles feathers. Trick is to keep it clean.

The current game being played over the lighting regs is still in its early innings. ICC opened by pitching a couple of low curves (Mar., page 33). Immediately there was a rhubarb. Some claimed ICC was really at bat and struck out.

Truck Trailer Manufacturers Assn. and Automobile Manufacturers Assn. got on the mound last month and pitched a couple of hot petitions at ICC (page 33, this issue). According to some this puts them on first and second base. And the way the game is played that could be right.

Meanwhile American Trucking Assns. has been playing the field, fielding hot ones off the bats of fleet operators. (In "reg-ball" every-body can slug 'em at the same time.) ATA plans to ask for its official innings next month. But there are some who think it has so many players so far out in left field that it may be in danger of throwing the game. They can't seem to tell which of the new rules are fair balls and which are foul. Confusing? It sure is.

Then along comes a spectator with a home run. (Oh sure, spectators can play too.) His name: John Crosby, New Jersey Turnpike Authority.

The count, based on a six year traffic study, when he came to bat was this: One out of 10 vehicles on the Pike is a truck. Together they run up 9.8 per cent of the total vehicle miles. (Two runs.) But trucks are involved in about one out of four of the Turnpike's accidents and 39.3 per cent of the fatal accidents. (Two outs.)

Here's his homer that could break up the ball game: "Rear end collisions with trucks account for 65.5 per cent of these fatal accidents. Of this percentage, 75 per cent resulted from a vehicle striking the rear of a truck, and the remainder involved a truck striking another vehicle type. Seventy-five per cent of the rear end fatal collisions occurred during the hours of darkness. The tabulation leaves little doubt that the rear-end truck accident is a serious problem on a limited access highway such as the Turnpike." (Traffic Engineering, Feb. 1959.)

So before you join those who cry "Moider dem bums," consider who's doing the yelling—and why. "Reg-ball" can be a good, clean game that can do the industry and the country much good. For its final tally is the number of lives it can save on the highway. It's also part of the American way, for in a dictatorship, only the government could bat. But emotions and dollar expenditures should not stand in the way of playing the game with sound, clear cut rules.

Bart Rawson Editor

SPICER HEAVY-DUTY STAND UP UNDER THE

Tough Spicer Heavy-Duty Clutches run cooler, last thousands of miles longer on any job where extreme torque loads are being controlled. Many truck fleets report Spicer clutch life of 200,000 miles or more! And it's no wonder, for Spicer Clutches have these built-in advantages.



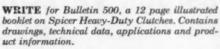
CLUTCHES BEAT THE HEAT, TOUGHEST PUNISHMENT!

- Internal Adjustment—provides a method of restoring the clutch to "like new" capacity. This is accomplished by means of an adjusting ring which can be turned as wear occurs.
- Pressure Springs—entirely free of contact with the pressure plate. This greatly reduces the possibility of heat set of springs with subsequent loss of capacity.
- Uniform Contact Pressure—eliminates uneven wear.
- Smoother Engagements—flexing of multiple levers produces cushioning effect, eliminating the need for a more expensive cushion disc.
- Reduced Friction—less pedal effort to release clutch.
- Release Parts Furnished with Clutch—no further engineering or purchase of parts is necessary.
- No Special Tools Needed—maintenance performed without expensive special tools.





Spicer Heavy-Duty Clutches are available in 13" 2-plate, 14" single and 2-plate, and 15½" single and 2-plate sizes. All Spicer Heavy-Duty Clutches are available with ceramic facing for added torque capacity.





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CORPORATION

Toledo 1, Ohio

Serving Transportation—Transmissions • Auxiliaries • Universal Joints • Clutches • Propeller Shafts • Power Take-Offs
• Torque Converters • Axles • Powr-Lok Differentials • Gear Boxes • Forgings • Stampings • Frames • Railway Drives

Many of these products are manufactured in Canada by Hayes Steel Products Limited, Merritton, Ontario





These B.F.Goodrich tires have carried livestock 126,000 miles

JOHN B. BELL specializes in livestock hauling in Iowa, Illinois, Missouri and Kansas. His fleet of tractor-trailers travels 18 hours a day, 7 days a week—usually on long-distance, high-speed runs. Keeping Bell's business rolling are B.F.Goodrich Traction Express tires. Those above have gone 126,000 miles, are still a long way from retreading.

The Traction Express tread is far thicker than that of an ordinary tire, has skid-defying cleats and cerfs. Under the tread is the B.F.Goodrich FLEX-RITE NYLON cord body. You get more retreadable tires—and more miles per retread—because this B.F.Goodrich construction resists heat blowouts and flex breaks, withstands double the impact of regular cord materials.

If highway hauling is your business, it will pay you to give Traction Express tires a try. No matter what your trucking job, see these moneysaving tires at your B.F.Goodrich Smileage dealer's. He's listed under Tires in the Yellow Pages of your phone book. The B.F.Goodrich Company, Akron 18, Ohio.

Specify B.F.Goodrich Tubeless or tube-type tires when ordering new equipment



B.F.Goodrich truck tires

Truck Tarp Tags

Do You Have a Tired Choke?

Mack Increases Oil Pressure

Tightening Injector Fuel Lines

Spring Cooling System Maintenance

Secondary Ignition Wiring

Ford Oil Filter

Dodge Reverse Gear Locking

Lark Transmission Oil Leak

Corvair Engine Oil Specs

Torque-Flite Band Adjustment

Ford Directional Signals

Valiant Oil Filter

Truck Tarp Tags

WHEN A truck tarp is badly damaged, do you know for sure whether to have it repaired at major cost or to junk it? If half of the tarp needs replacement, you should know whether the other half still has enough service life left to warrant the repair.

East Akron Tarpaulin & Awning Co., Akron, Ohio, has a good answer to that question. An aluminum tag (shown here) is attached to the



front of each tarp the company manufactures. The tag has date of manufacture and the customer's initials—in this case All States Freight. Now, if a tarp is damaged, the date on the tag indicates the age of the tarp and helps to determine whether it should be repaired or replaced. Incidentally, All States' standard tarp is neo-



TIMELY NOTES ON TRUCK, BUS. PASSENGER CAR
FLEET MAINTENANCE and OPERATION
briefed by ED SHEA, Technical Editor

prene coated nylon Coverlight-N supplied to East Akron T & A by Vulcan Rubber Products Division of Reeves Brothers, Inc.

Do You Have a Tired Choke?

THE MODERN automatic carburetor choke control is a thing of precision. It must maintain the choke valve at just the right degree to produce a balanced fuel-air mixture suitable for engine requirements. These requirements vary with changes in temperature of the atmosphere and of the engine itself. Until the engine reaches normal operating temperature the choke should cause the carburetor to deliver a somewhat richer mixture which gradually becomes leaner as the engine warms up.

This gradual change is engineered into the material and design of the choke thermostat spring. When new, it is calibrated to fine sensitivity and graded to react precisely to various temperatures within its range. However, time and the ravages of heat and corrosion take their toll of this control. It no longer responds uniformly throughout the heat range.

The thermostat becomes less sensitive to temperature change and the original calibration cannot be restored by readjustment.

Replacement of this very low cost thermostat is the answer. Adjustment of the old part toward the rich side will close the choke for cold starting; or, turning the adjustment toward lean, will correct over choking when hot. You can't, however, replace the grade scale that has been lost to time and fatigue. This is the factor that locates the choke valve at exactly the right opening at any particular time during the period of engine warm-up.

Don't waste time adjusting a tired choke, replace the thermostat spring.

Mack Increases Oil Pressure

M ACK says that recent changes in its gasoline and diesel Thermodyne engines have raised the maximum oil pressure to 75 lb. All (TURN TO PAGE 12, PLEASE)

This heavy-duty brake lining wears slowly...and brakes

As a pioneer manufacturer of hydraulic brakes, air brakes, and all essential brake service parts —WAGNER KNOWS BRAKES and the qualities required in efficient, safe brake lining.





ONE CALL GETS ALL

your brake service needs from one source—your Distributor of Wagner Products.

LOCKHEED BRAKE PARTS, FLUID, BRAKE LINING and LINED BRAKE SHOES & ALE HORNS & ALE BRAKES & TACHOGRAPHS

withstands braking heat... require fewer adjustments!

Wagner Lockheed HEAVY-DUTY BRAKE LINING warrants use on your toughest jobs

You'll find that you have less trouble from high braking temperature conditions, and you'll get more mileage per set before replacements are needed, when you use Wagner Lockheed Brake Lining or Blocks. Your costs will be less too!

Turn to Wagner to solve your brake lining problems. Wagner Lockheed has *all* the requirements of good brake lining.

SOME OF THE FEATURES INCLUDE-

- (1) IMPROVED FORMULA which results in a lining that withstands today's high braking temperatures... Lining WEARS SLOWLY, requires fewer brake adjustments, gives LONG SERVICE LIFE. These same formulations are furnished to vehicle manufacturers for original equipment.
- (2) DESIRED COEFFICIENT OF FRICTION which causes lining to maintain life-long frictional value.
- (3) RELATIVE FREEDOM FROM TENDENCY to SCORE DRUMS... because lining contains no harmful abrasive materials.

- (4) NOT UNDULY SENSITIVE TO MOISTURE ... functions satisfactorily even under severe operating conditions... HAS MINIMUM TENDENCY TO SWELL.
- (5) NON-COMPRESSIBLE wears evenly, causes no offensive odors, and is quiet in operation.

LINE IS COMPLETE. Available in sets, blocks, rolls, slabs, cut segments, and on shoes. Wagner provides more than 100 width and thickness combinations in internal rolls, external rolls, and block segments...over 400 individual sets, and over 350 block sizes.

YOU BENEFIT, too, by purchasing all your brake service needs—Wagner Lockheed Hydraulic Brake Parts, Fluid and Lining—from one dependable source—your nearby Wagner supplier...ASK for FREE COPY of CATALOG AU-500.

AND REMEMBER—when ordering air brakes, specify WAGNER LOCKHEED AIR BRAKES—the leading system with the rotary air compressor.



Wasner Electric Corporation

6470 PLYMOUTH AVENUE., ST. LOUIS 33, MO., U.S.A. (Branches in principal cities in U.S. and in Canada)

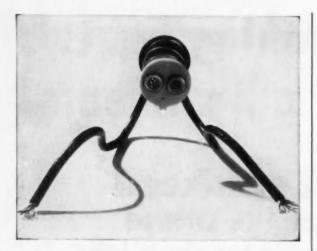
Please mail us a FREE copy of Catalog AU-500 on the Wagner line of Hydraulic Brake Products.

NAME

PIRM NAME

ADDRESS

TY & STATE



Bred To Banish Bugs From Truck Lights

Here is a new breed of electrical assembly developed for one purpose . . . to end the plague of "bugs" that knock out lights and tie up a rig.

The new system is a cross-breed of time-proven designs and new materials. The insulator disc is ceramic—the finest dielectric material ever used in a light. The tension spring is stainless steel—it will never rust out or become brittle. Another innovation is the neoprene gasket under the spring which seals out moisture.

The leads are neoprene-covered for years of protection. The assembly is fitted into a solid brass socket. The entire system will outlast the truck—the only thing that can fail in an Arrow light is the bulb!

Perhaps the biggest news of all is that this assembly is used in every Arrow light regardless of price. No light is truly modern without it. Ask your Arrow jobber for the details or write to Arrow Safety Device Co., Georgetown, Delaware.

The industry's first flawless flashing system has just been announced by ARROW—write for details on this important development.



Arrow's Popular Series 48 Marker Lights Feature Lifetime Construction of Stainless Steel, Lucite Plastic Lens, Lens and Mounting Gasket.



TRUCKS



Continued from Page 9

Thermodyne engines now have oil pump relief valve plungers and caps with different spring seat dimensions for greater spring compression and higher oil pressure. The Model Nos. ENDT-673 and ENF-707C with oil cooler have a new relief valve cap with a shallower well for the external valve. This also increases spring compression and oil pressure.

Oil pressure in all Mack engines formerly averaged 10-20 lb idle and 45-60 lb maximum. Future pressure on all engines will be shown at 10-20 lb idle and 45-75 lb maximum.

Tightening Injector Fuel Lines

WHEN YOU'RE installing injector fuel lines on GM diesels, tighten the connections only enough to prevent fuel leakage. If you tighten them too much, the flared end of the line may become twisted or fractured, says the Detroit Diesel Engine Div.

After all the lines are installed, run the engine long enough to see if the connections are tight enough. If any of them leak, just tighten them enough to stop the leakage.

Spring Cooling System Maintenance

OUT DOWN-TIME and speed up cooling system maintenance with this assembly line operation for your fleet. These tips come from Union Carbide. If you group six or eight vehicles together and place them in two rows facing each other, your men can save time in performing the following program:

Drain anti-freeze as rust and corrosion inhibitors wear out during the winter. Hot weather driving with anti-freeze, without these inhibitors, causes faster corrosion in the cooling system.

Flush the cooling system with plain water. If there's corrosion, scale or grease, use a chemical cleaner. If there's any sign of rust plugged radiator tubes, pressure flush the radiator and engine block with water and compressed air. Check thermostat for operation at proper temperatures.

Check hoses and replace weak or worn ones.

Tighten hose clamps and replace broken ones.

(TURN TO PAGE 16, PLEASE)



ADD BONUS RECAPS TO BIG ORIGINAL MILEAGE AND ... WOW!

Total cost-per-mile really hits bottom with Lee Super DeLuxe Highway Nylons

There's one way to prove it—keep accurate tire mileage costs. Lots of smart operators do. They are the ones who know you can't beat Lee Nylons. Why? Simple. Rugged construction that gives long original mileage and leaves a carcass strong enough for multiple recaps.

This takes some doing—and Lee does it. By using the toughest cord known. Super-Tensile Nylon. Produced by an exclusive Lee process. Users say this has other advantages, too. Protects against impact breaks, blowouts and moisture damage.

And the tread! Natural rubber. Special Lee design. End result: extra traction, cooler running on the road, added tire life.

So . . . how about Lee Super DeLuxe Highway Nylons for your fleet? Tube or tubeless, they'll give you the greatest original mileage and more recaps than you can count.

P.S. About those recaps . . . specify Lee Premium Double-Life Tread Rubber, branded for your protection, and watch your Treasurer smile.

LEE RUBBER & TIRE CORPORATION

Shown is the Lee Super DeLuxe Highway Nylon. Whatever your truck tire needs, there's a Lee that's right for the job.





William Cicero, of New York's Triboro Coach tells... "Why we've used nothing but Timken* bearings for 25 years"

"It's because Timken® bearings always give us satisfactory performance, with the lowest maintenance cost." That's one reason they've used them so long, says Bill Cicero, Superintendent of Maintenance for Triboro Coach, Jackson Heights, New York. He adds, "Timken bearings are the work horse of the vehicle, rolling the load. And we always get fast action from the Timken sales engineer if we need any bearing service."

Triboro's 130 eighty-passenger

coaches roll 3,900,000 miles a year. Their shop records show that their Timken bearing replacement cost per vehicle runs only .0000462% of total maintenance.

Like thousands of fleet owners, Triboto buys Timken bearings on price. Not initial price—but price per mile. They know it isn't what you pay for bearings that counts, it's the performance you get.

You get long, low-cost performance because we carefully guard Timken bearings' quality from start to finish. Even the steel that goes into the bearings is carefully selected. We've been producing the finest alloy steel for many years so we know good bearing steel—and use it. For replacement bearings, do what most truck and bus manufacturers do: specify Timken tapered roller bearings. And send for free helpful booklet, "Fleet Owner Service Manual." The Timken Roller Bearing Company, Canton 6, Ohio. Cable: address "TIMROSCO".

Lowest price per mile...
mile after mile after mile

TIMKEN tapered roller bearings



ENJAY DELIVERS 1,000 th LONG TON OF BUTYL!

PRODUCTION FACILITIES INCREASED TO MEET CONSTANTLY GROWING DEMAND

There have been many elastomers developed since the first commercial ton of Butyl was used in 1943, but no other rubber, synthetic or natural, offers so many outstanding properties for so many applications.

Plant expansion plans announced recently will

increase butyl production capacity some 50 percent by 1961 and, at today's rate of consumption, the two million-ton mark will be reached within the next six or seven years. Two new additions to the butyl product line, Chlorobutyl and Butyl Latex, will soon be available in commercial quantities.

VERSATILE ENJAY BUTYL'S OUTSTANDING PROPERTIES MAKE IT SUPERIOR TO OTHER RUBBERS FOR MANY APPLICATIONS. SOME ADVANTAGES:

- RESISTS TEAR AND ABRASION

 used in the new and revolutionary all-butyl tire.
- STANDS UP AT HIGH TEMPERATURE
 ... used in steam hose and tire
 curing bladders
- HAS EXCELLENT ELECTRICAL PROPERTIES

 used in high voltage cable
 insulation
- IS IMPERMEABLE TO GASES
 ... used in virtually all rubber air-holding applications
- MAS WIDE RANGE OF DYNAMIC PROPERTIES

 used in over 100 applications
 on the modern automobile
- DISPLAYS OUTSTANDING CHEMICAL
 RESISTANCE... used for the storage
 and shipment of many chemical
 and commodity products
- WITHSTANDS EXPOSURE TO SUM AND WEATHER ... used in irrigation pipe and roof coatings.

Want to find out fast, how versatile Butyl can improve your product? Call or write the nearest Enjay office.



EXCITING NEW PRODUCTS THROUGH PETRO-CHEMISTRY

ENJAY COMPANY, INC.

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Akron · Boston · Charlotte · Chicago · Detroit · Los Angeles · New Orleans · Tulea · Toronto

COMMERCIAL CAR JOURNAL, April, 1960



pany follows the most advanced engineering practice in reducing maintenance and repair costs. In reconditioning aluminum upper crankcases of gasoline engines, his company uses Heli-Coil Inserts . . . with major savings.

Mr. Connors writes:

"For permanently repairing worn and stripped threads in 116 holes in each casting with Hell-Coll Stainless Steel Inserts it costs us only \$85.00 per engine—including labor. That's a big saving over the \$400.00 it would cost for a new casting.

Heli-Coil Stainless Steel Inserts may offer you comparable sav-ings. They are stocked nationally by automobile and industrial distributors. Write for full information and distributor list.

*Reg. U. S. Pat. Off. HELI-COIL CORPORATION 3904 SHELTER ROCK LANE, DANBURY, CONN.

In Canada: Armstrong Beverley Engineering Ltd., 6975 Jeanne Mance St., Montreal 15, Que.



STATE

ELECTRICAL



Continued from Page 12

Check fan belts and other drive belts for signs of wear and for proper tension.

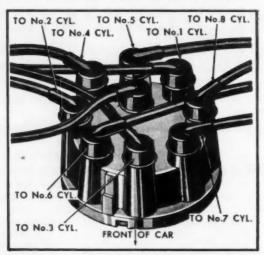
See that there's no rust or dirt in radiator pressure cap, and that the rubber gasket is in good condition. Remove all dirt, leaves, paper, bugs or other obstructions from radiator air passages.

Refill the cooling system with fresh water and add a good rust inhibitor.

Run the engine and recheck coolant level, then check thoroughly for leaks at radiator, hoses, water pump and cylinder head gaskets.

Secondary Ignition Wiring

ISS-FIRE in 1960 Mercury 383- and 430-VI cu in. engines could be caused by leakage through the secondary ignition wiring. The distributor to spark plug wires might be pinched or chafed between the air cleaner and carburetor fuel line or the air cleaner and heater outlet elbow. In case of engine miss-fire, check the



secondary wiring for leakage and reroute as shown.

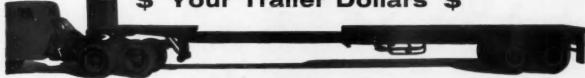
Ford Oil Filter

WHEN changing the oil filter element on a Ford OHV V-8 check the position of the filter adapter plate. An improperly installed adapter plate with the "top" mark down will (TURN TO PAGE 20, PLEASE)



S-T-R-E-T-C-H

\$ Your Trailer Dollars \$



with THIS UNIQUE 2 in 1 TRAILER

The newest and most unique trailer in the high-flat field today! This versatile "2 in 1" rig s-t-r-e-t-c-h-e-s your trailer dollar as it s-t-r-e-t-c-h-e-s its deck, from 35' closed to 55' extended. No Binding or Sagging even when completely open. No center jack necessary for closure. No DOG-TRACKING, No SWAYING or WHIPPING.

Why buy a conventional high-flat when for slightly more this new unit will give you a standard length when closed and extra length extended—for those "special" hauls! Reduce permit problems. No need for Costly "special" equipment that's often idle. It will Pay you to own an, "on the move," Rogers X-tendible.

New lightweight, axle suspension for freedom of axle movement in turns and smoother riding with less maintenance. Basic force brakes, free of hop and chatter with wide 7" shoes.

Model HFT-25-X

The only flat-bed extendible built with an "X" braced "I" beam frame. Weight 11,800 lbs. Experienced engineering, high quality workmanship and modern production Open Length.... 55 ft. Closed Length ... 35 ft.

methods all contribute to Rogers ability to offer this uniquely constructed trailer at a very competitive price. Experience Builds .

Pioneer Manufacturers of Heavy **Duty Trailers for 55 Years** EXPORT OFFICE: 50 CHURCH STREET New York 2, N. Y., U.S. A. CABLE BROSITES

When it comes to getting their chickens across



"All I know is our own experience," says A. R. Royal, President of one of the South's leading poultry houses. "And that says Hi-Miler Cross-Ribs are tough-in capital letters.

"Look at the facts. We haul live chickens, right from the farm to markets up to 1500 miles away. And we have to get



Once again we have proof of the outstanding performance of Hi-Miler Cross-Ribs. But we like to point out that this report is one of many we are receiving on *all* of the tires in our complete line. The reason? All Goodyear Truck Tires, class by class, are built to be "the world's toughest" and here's how we make them that way:

Toughest Bodies: Built with the newest cords, tempered like steel with Tension, Temperature and Time (our exclusive 3-T Process) for greater resistance to heat, shock and fatigue—for longer and greater recappability.

Toughest Treads: Compounded with new, top-quality rubber and the latest chemicals -

THE WORLD'S TOUGHEST TRUCK TIRES BY

GOOD

the roads, they rely on tough Cross-Ribs

them there alive—and on time, no matter what the weather conditions might be.

"Our books show that Cross-Ribs-on the pulling wheels of all our 110 rigs-are giving us up to four times the mileage of previous tires-and no roadside delays. That means we're getting about 125,000 trouble-free miles before recap as against the 30,000 we used to get with ordinary tires. And on top of that, Cross-Ribs are great on recapping, too.

"Goodyear Truck Tires are the world's toughest? I'll buy that and so will my drivers."



including advanced super-toughening agents we recently pioneered – for greater original mileage than obtainable from any comparable tire.

So you see when you put these treads and bodies together in tires that are precision-built using electronic controls, you can understand why we can say Goodyear Truck Tires, class by class, are the toughest in the world. We're sure they'll give you the smoothest, lowest-cost miles you can get. Why not buy or specify a set or two and see for yourself? See your Goodyear Dealer. Or write Goodyear, Truck Tire Dept., Akron 16, Ohio.





MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

4-WAY SAVINGS MUFFLERS

- 1. LONGER MUFFLER LIFE . . up to 100,000 miles and more!
- 2. PEAK POWER—QUIETLY . . eliminates the cause of noise complaints, fines!
- 3. LOWER OPERATING COSTS . . . from better engine performance and gas mileage!
- 4. MAINTENANCE SAVINGS . since excessive heat is eliminated!

start on the road to Bigger Profits ... NOW! with ATI "engine-mated" MUFFLERS.

They're exclusively custom-specified to the cubic inch displacement of your truck or bus engine. This feature plus superior construction and heavy gauge materials, gives outstanding results no other replacement muffler can match!

Send for catalog 102A and the name of your nearest distributor.



Alexander-Tagg Industries

HATBORO, PENNSYLVANIA

OSborne 5-7200

ROSS and WHITE "WILSON" PORTABLE WASHERS

- Can be used indoors or autdoors on front, sides and back of Trucks, Trailers or Buses.
- Wash Faster and Cleaner moving brush scrubs out damaging road grime.

• Reduces Washing time up to 80%



Junior "Wilson" with swivel mounted brush is ideal for the small fleet or the fleet with lim-

You can move them anywhere. the garage—in the yard—around the dock—you get a time-saving, schedule-keeping advantage that means more profit to you.

If you want versatility with "Bonus Value" performance in your wash-Value" performance in your washing equipment, write Today for full information on the "Bonus Value" Portable Washer.

facturers of: "Blackhall" Stationary Washers • "Wilson" Portable Washers "Buck" Cyclono Cleaners • DUAL BRIGHT 35 Brightener and Cleaner

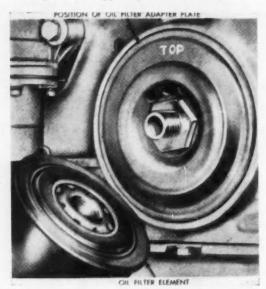
ROSS and WHITE COMPANY Chicago 6, Illinois . Dept. CC-4 Chicago Daily News Building

TRUCKS



Continued from Page 16

allow oil in the filter housing to drain back when the engine is stopped (see illustration). This



means the oil pump has to fill the filter housing before the bearings get any oil.

If you find the pressure is slow building up when you start the engine, check the adaptor plate. You may prevent later bearing failure.

Dodge Reverse Gear Locking

ON K, L and M Series 1959 Dodge trucks with New Process 420 transmission, trouble is reported in some cases with locking in reverse gear. One reason, says Dodge, is overshift or excessive forward motion of the reverse gearshift rail. When this occurs, gearshift lever moves out of the reverse lug past the third and direct gearshift fork. To correct this, Dodge has available a new reverse gearshift rail lug, MoPar Part No. 1933509.

Lark Transmission Oil Leak

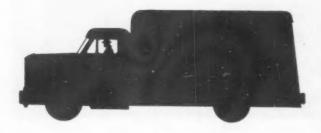
IL LEAKS at the standard and overdrive transmission on 1960 Studebaker cars may be caused by oil leaking between the rear oil seal and the transmission tail shaft housing, says the manufacturer. These leaks may also occur around

(TURN TO PAGE 24, PLEASE)





How to get precisely what you want in brake blocks or linings



ASK YOUR JOBBER ABOUT THE RAYBESTOS HEAVY DUTY BRAKE CLINIC! An illustrated technical program on the proper servicing of heavy duty brakes Raybestos Brake Blocks and Linings provide . . .

- Maximum resistance to dangerous brake fade
- · Unsurpassed durability
- · Smooth stops-no grab, no jerk, no squeal

What's more, they treat costly brake drums with the utmost care. And, remember, only Raybestos offers you eight different friction materials customtailored in the right combinations to suit your requirements.

In short, when you insist on Raybestos, you get precisely what you want in brake blocks or linings—safety and superb performance at the lowest possible cost per mile no matter what your equipment or where you operate.



Woven Molded



Raylok® and Ray-Metl® Clutch Facings



PGT Heavy Duty Truck Sets



V-Drive and Automatic



Full Molder



Heavy Duty



RAYBESTOS DIVISION of Raybester-Manhattae, Inc., BRIDGEPORT, CONN.
RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Brake Fluid
Clutch Facings • Industrial Rubber • Mechanical Pockings • Asbestos Textifes
Engineered Plastics • Sintered Metal Products • Rubber Covered Equipment
Laundry Pads and Covers • Abrasive and Diamond Wheels • Industrial Adhesives
Bowling Ballis



NOW-YOU GET CLEANER ENGINE PARTS, LONGER ENGINE LIFE BECAUSE OF THIS MAJOR ADVANCE IN LUBRICATING OILS SUPER RPM DELO SPECIAL



CLEANER PISTONS AND RINGS



GREATER ENGINE PROTECTION.



LOWER MAINTENANCE COSTS!

RPM DELO Oils have been quality leaders in the lubricant field for over 25 years—the most popular dual-purpose engine lubricants ever developed.

Now, Super RPM DELO Special Lubricating Oil sets a new standard of quality. Developed ahead of diesel engine design, it upgrades performance in your diesel and heavy duty gasoline engines—thoroughly tested in the laboratory and under the most severe field conditions. It is particularly effective for mixed fleet operations.

Super "RPM DELO" Special is compounded with Detergent-Action additives, corrosion and oxidation inhibitors and defoaming agent. These built-in properties more than double its over-all compounding effectiveness, assure cleaner pistons, rings, and valve lifters, greater engine protection. In performance it surpasses Supplement #1 level oil and results in longer troublefree engine life with lower maintenance costs.



For longer engine life, real engine economy, ask your local representative about Super "RPM DELO" Special, or write any company listed below:

- STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20 . STANDARD OIL COMPANY OF TEXAS. El Paso
- THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey . THE CALIFORNIA COMPANY, Denver, Colorado



Q and A Bulletin



out of Bostrom Seats

Questions seem to come up now and then about the use and care of Bostrom "Level-Ride" 80 Seats. Maybe you've asked some of them; so, here are some answers. If you have additional questions, send them along. We'll answer them for you and perhaps cover them in additional messages like this.

Q: How do I justify the use of Bostrom "Level-Ride" 80 Seats?

A: The advantages of "Level-Ride" 80 Seats really return the nominal additional cost many times over. Their big feature, of course, is that they remove 80% of vibration and road shock from truck driving. This reduces driver fatigue, makes drivers more efficient, more productive, safer, more profitable. Rest stops may be fewer and shorter. Scheduling improves. Driver turnover tends to go down. Driver respect for equipment goes up, which improves equipment handling. These and other advantages contribute to cost reduction and improved profits.

Q: What are specific benefits to my company?

A: Because "Level-Ride" 80 Seats take 80 % of jolts, jars and vibration out of truck driving, many driver benefits follow. Obviously, there are health benefits. Reduce vibration and shock and you have healthier, happier drivers—better "good will" men when they contact customers and the public. Being less tired at the end of the day, drivers are happier on their jobs and at home, too. Also, since fatigue is an accident-prompter, Bostrom "Level-Ride" 80 Seats increase driver safety.

Q: How long do suspension seats last? Do they stand up as well as standard seats?

A: Generally, a Bostrom "Level-Ride" 80 Suspension Seat will outlast a standard seat. Much of the movement which wears out a standard seat is absorbed in the suspension system. This applies particularly to seat cushions and cushion springs. In all respects, Bostrom seats are built to high-quality, long-life standards. It must be remembered, however, that a truck suspension seat is a machine—with working parts subject to wear just as parts of all machines are. The seat could not provide the many benefits it does without being so. This does not mean shorter life than a standard seat, but it does mean that some attention must be given suspension seats in order to maintain their built-in long life.

Q: What attention and maintenance are required on suspension seats?

A: The primary requirement is periodic inspection of the seats. Points to check particularly are the seat mountings, the linkage between the mountings and suspension arms, bearings and rubber torsion springs. Especially check for loose seat mountings. If the seat becomes wobbly due to loose mountings, linkage and bearings are likely to suffer unnecessary wear, which in turn may adversely affect the torsion springs. Always be sure mountings are tight. Should wear show up on the linkage or bearings, replacement of these parts is recommended. This is very inexpensive and simple to do. Bearings otherwise should require no service because they are lifetime-lubricated with molybdenum disulphate.

Q: What about torsion spring maintenance? What do I do if springs wear out?

A: Normally rubber torsion springs in a Bostrom seat should last the life of the seat. Their fatigue life is rigidly pre-tested, to far exceed average wear. However, certain conditions—such as undue stress from seat wobble, contact with oil or grease, excess heat and, rarely but occasionally reported, unidentified factors—will result in springs wearing out. Replacement springs are available in the parts department of your dealer or distributor from whom you purchased the seat, and also from the Bostrom factory.



Q: How important is driver weight adjustment?

A: Extremely important. Adjustment to the weight of the driver is essential for a good ride. Be sure the driver checks the adjustment before he sits down. He should ride with the seat suspended in mid-range—with the suspension mechanism deflected half way. If the seat isn't quite right for the driver's weight after he sits down, additional adjustment can then easily be made.

Q: What's the answer to topping and bottoming on rough roads or off the highway?

A: If your trucks are frequently used over extremely rough roads or operated off the highway — or if your drivers frequently experience topping and bottoming of the seat—the addition of Rough Usage Assemblies is recommended. As you order new trucks or replace old seats, an additional answer is to specify the new, improved "Level-Ride" 80 Seat with built-in shock absorber. This new seat gives drivers a passenger-car ride on regular runs and eliminates the jolts, jars, topping and bottoming over extra-rough roads, chuck holes, bumpy railroad tracks, around loading docks, etc. This seat also has a contour back for added driver comfort.

Q: Where is the best place to go for parts and service?

A: Go to the dealer or Bostrom distributor from whom you purchased your seats. If further information or attention is required, Bostrom stands by to help you.

Bostrom "Level-Ride" 80 Seats are available on any make of new truck. They may also be installed on any of your present trucks. See your truck dealer or Bostrom distributor.



BOSTROM CORPORATION

133 West Oregon Street . Milwaukee 4, Wisconsin



Photo courtesy of Clark Equipment Co

Keep off-the-road rigs on-the-job with OAKITE

MAINTENANCE CLEANING

Steady, on-the-job production from your off-the-road rigs shows up clearly in the profit column. That's why good maintenance cleaning practices are a must.

Oakite cleaning helps you restore your equipment to good working order fast. There are safe, efficient, time-saving Oakite materials for every maintenance job, including:

- Dissolving carbon deposits
- Removing grease and sludge
- Stripping paint
- Removing rust
- Descaling radiators

-and many, many more. Your local Oakite man will be glad to tell you about it. He'll show you exactly where he can save you money and time in your maintenance cleaning operations. Or, for free illustrated



In our 51st year

Technical Service Representatives in Principal Cities of U. S. and Can

FLEET CARS



Continued from Page 20

the cap screws that hold the tail shaft housing to the main transmission case.

For a positive seal between the rear seal and the transmission housing, use a non-hardening type of sealer at this location. Apply the same type sealer on threads of the cap screws holding the tail shaft housing to the transmission main

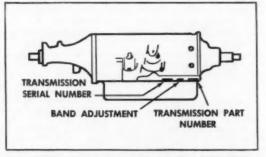
Corvair Engine Oil Specs

HEVROLET Service News says-"The only multi-purpose oil recommended for Corvair use is for temperatures that are consistently below -10 deg F. Use SAE 5W-20 for this temperature range. Use SAE 10W in areas where temperature range is -10 deg F to +32 deg F. Use SAE 30 in areas where temperature range is 32 deg F and above."

Torque-Flite Band Adjustment

K ICK-DOWN BAND adjustment must be correct in order to get maximum transmission performance in all V-8 Plymouths with Torque-Flite transmissions.

Since September 1959, back-off specifications are stamped on the pan rail of the transmission case. This is to prevent misunderstanding of kick-down band adjustment, says Plymouth.



Beginning with transmission Serial No. 1442920, the transmission part number, band adjustment and serial number appear in that order (see sketch). The adjustment stamp gives the number of back-off turns needed after the adjusting screw has been torqued to 47-50 in. lb, using extension tool No. C-3583, with the transmission in the car. However, if adjustment is made with

(TURN TO PAGE 28, PLEASE)





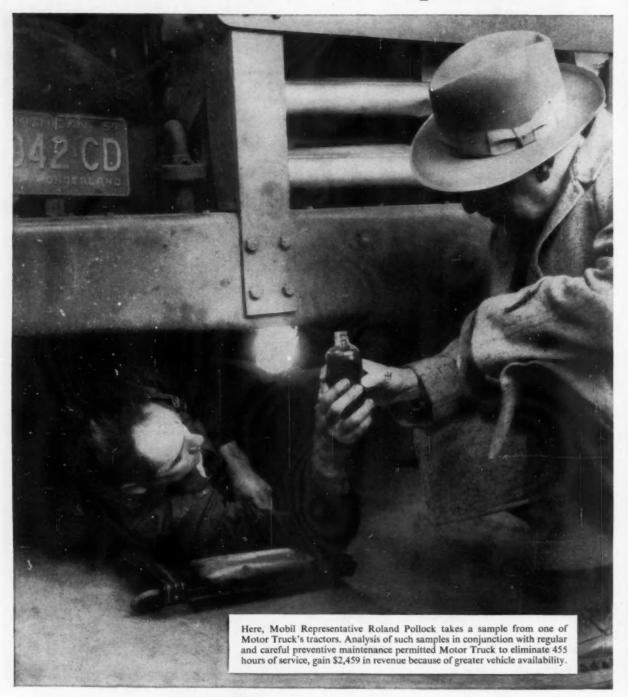
A. SCHRADER'S SON - BROOKLYN 38, N. Y. Division of Scovill Manufacturing Co., Inc.

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

Made in America to American Standards of Quality.

How Mobil Helped this





obil Correct

Fleet Owner Save \$60,471





Motor Truck Services cuts operating costs on 65 units leased to Kramer Bros.... saves enough for 5 new tractors or over 250,000 gallons of fuel

Working with Motor Truck Services personnel, Mobil explored ways of improving oil change, filter change and chassis lubrication practices. The objective: to establish the optimum length of service based on the severity of operating conditions and the quality of preventive maintenance.

Mobil was able to establish the correct intervals between lube jobs and oil changes, and insure maximum life of lubricated parts. The technique, as sponsored by Mobil, calls for: (1) use

of high-quality products (2) regular inspection of all lubricated parts and (3) periodic analysis of samples of oil.

In two years' time, Mobil has helped Motor Truck Services save \$60,471—in lubrication, labor, increased revenues and reduced garage rentals.

Mobil's representatives can help you. Call your local Mobil office. Or write Mobil Oil Company, 150 East 42nd Street, N. Y. 17, N. Y.



After 175,000 miles of service, this wheel bearing is as good as new! Regular inspection and correct lubrication of chassis parts enabled Mobil to help Motor Truck save \$24,615 in labor and material!



Regular oil and oil-filter changes are necessary to long engine life, but excessive changes can be costly. Employing Mobil "Optimum Oil-Change Techniques," Motor Truck saved \$18,757.



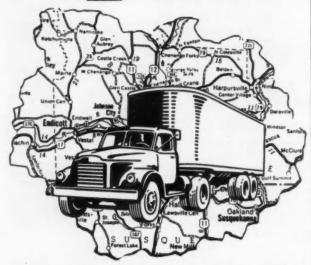
Using a Mobilgrease and improved maintenance techniques, Motor Truck Services streamlined lubrication practices, eliminated the need for additional shop space. Savings to Motor Truck: \$12,000.



Mobil studied lubricant storing, handling and dispensing techniques . . . recommended installation of bulk tank and improved procedures which saved Motor Truck \$2,640 in two years.

Lubrication

Do the auxiliary fuel tanks on your trucks meet every safety requirement?



WHEN YOU SPECIFY SNYDER TANKS YOU'RE ABSOLUTELY SURE THEY DO BECAUSE ONLY SNYDER...

- PICKLES ALL STEEL to remove mill scale abrasives. And Snyder vacuums and magnetically cleans each tank to ensure safe, dirt-free operation.
- FOG SPRAYS EACH TANK'S INTERIOR to prevent rust.
- FLANGES ALL TANK HEADS to give extra insurance against rupture from impact. Ribbed bottoms and bossed heads strengthen and stiffen all flat bottom tanks to better withstand road shock.
- MACHINES TOP OF FILLER NECK to guarantee positive gasket seating of cap eliminating fill cap leakage. Ball check vent in top of tank provides full ventage.
- SUBMERGES EVERY TANK IN WATER and pressurizes with air to test for and correct leaks. After this test, every tank is visually inspected before shipment.
- ◆ MAINTAINS COMPLETE TANK RESEARCH AND TEST FACILITIES. Snyder, pioneer in safety tank design, continues to lead the field with tanks custom engineered and designed to meet the most rigid standards, provide economical efficient fuel supply, and incorporate all safety features.
- AVAILABLE IN STEEL OR ALUMINUM No matter what make and model truck you want to fit, no matter what style and capacity tank you desire, Snyder's trained sales engineers and Engineering Department are available to assist you. And each Snyder Tank is designed, built and tested to the highest quality standard in the industry. You can rely on them.

For safety, satisfaction and service, be sure to:

ALWAYS SPECIFY SNYDER

Snyder Tank

P. O. BOX 14, BUFFALO 5, N. Y.







ELECTRICAL



Continued from Page 24

transmission out of car using wrench No. C-3380, adjusting screw should be torqued to 70-75 in. lb. The recommended service adjustment for all Torque-Flite reverse bands is 2½ turns.

Ford Directional Signals

TO CORRECT blown directional signal fuses in 1959 Ford cars, use a 7½-amp fuse in place of the 5-amp job. Fuse is located behind the dash under the headlight switch.

Valiant Oil Filter

INFORMATION FROM Valiant says that a chattering relief-valve type noise, heard and felt in the crankcase oil pan, can be caused by a type of oil filter that has eight holes in its base. This noise can be affected by turning the retaining nut on the oil pressure relief valve spring. To correct this trouble, replace the eight-hole filter with a four-hole filter.



"No thanks - - I've already got a 'C' clamp."



New Eaton Process Cuts Costs of Alloy-Faced Valves

The new Eaton ECONOSEAT process of applying heat resistant and corrosion resistant material to valve faces makes possible a worthwhile reduction in the amount of costly protective alloys required.

If you have hesitated to use high-alloy-faced valves because of cost—or are now using valves conventionally faced and are interested in reducing costs—you will want complete information about the advantages of Eaton ECONOSEAT Valves. Eaton engineers will be glad to consult with you without obligation.



Call on Eaton engineers to discuss with you the possibilities of applying the ECONOSEAT process to parts, other than valves, requiring protective coatings.

EATON

MANUFACTURING COMPANY
BATTLE CREEK, MICHIGAN

PRODUCTS: Engine Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Gears • Hydraulic Pumps
Truck and Trailer Axles • Truck Transmissions • Permanent Mold Iron Castings • Automotive Heaters and Air Conditioners
Fastening Devices • Cold Drawn Steel • Stampings • Forgings • Leaf and Coil Springs • Dynamatic Drives and Brakes
Powdered Metal Parts • Variable Speed Drives • Speed Reducers • Differentials • Centralized Lubrication Systems



"Simple and Safe...that's the Simplex!"

says G. D. Joyner

Vice President

R-C Motor Lines, Columbia, South Carolina

"In actual road service, they proved just that."

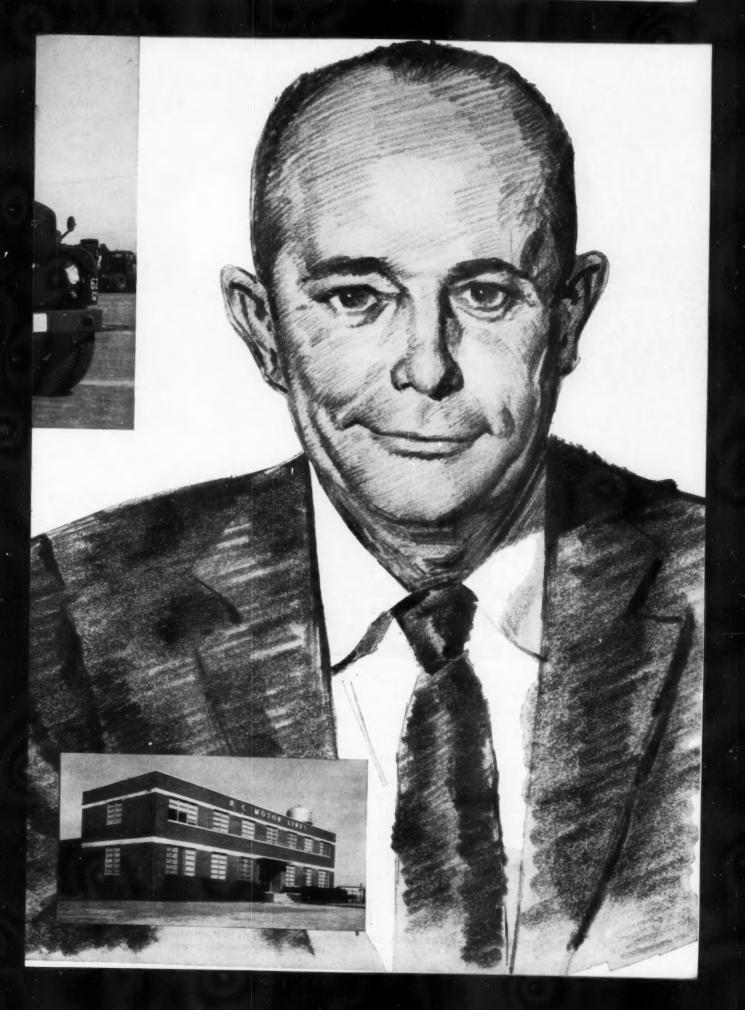
"Simplex Wheels looked good to us from the first, but only actual road service can tell you how good a 5th wheel really is. So, about three years ago, we put Simplex Wheels on a few trucks and watched them closely for several months. As a result, our last one hundred 5th wheels have been Simplex. "We like these wheels for many reasons, espe-

cially the mechanical simplicity that makes them couple and uncouple so swiftly and easily. We also like the rubber-cushioned rocker arm that soaks up shocks and saves us money in reduced damage to loads and equipment. A very good safety factor is still another point in favor of Simplex. We find Simplex to be a satisfactory 5th wheel in every way."

1 1 1

The same decision has been arrived at in the very same way by many other truckers the country over. Why not put on a "show me" test of your own? Contact your local Simplex distributor or write direct to Simplex 5th Wheel, American Steel Foundries, East Chicago, Indiana.

Simplex Simplex A product of American Steel Foundries





PERFECT CIRCLE PISTON RINGS ARE BUILT TO TAKE IT

HOTTER THAN A BLOWTORCH

The searing heat that's created inside engine cylinders causes inferior piston rings to lose their strength and resilience, and wear out far before their time. That's why Perfect Circle employs special metallurgical skills to produce ring materials that have the high heat stability needed for long life.

Extra-thick, solid chrome plating adds greater protection against scuffing. And, special alloys and heat treating deliver extra-high heat resistance for critical applications.

Whatever the job, Perfect Circle rings are built to take it. Insist on Perfect Circles—first choice of leading engine manufacturers and mechanics everywhere.



PERFECT / CIRCLE

PISTON RINGS · PRECISION CASTINGS · POWER SERVICE PRODUCTS · SPEEDOSTAT

HAGERSTOWN, INDIANA . DON MILLS, ONTARIO, CANADA



APRIL 1960 FLEET HIGHLIGHTS as reported by Commercial Car Journal

Lighting Rules start to focus

Interstate Commerce Commission's new lighting rules (Mar., page 105) and the problems they raise (Mar., page 33) are starting to come into focus. Last month, COMMERCIAL CAR JOURNAL editors visited both Detroit and Washington, contacted responsible people in both business and government. As of the moment, it appears almost assured that there will be at least two important changes . . . a postponement in the effective date for marking lamps with SAE type identification and modification of the controversial voltage drop requirement. There may be more.

Truck-Trailer Manufacturers Assn. and Automobile Manufacturers Assn. filed separate petitions with the ICC late last month asking for a year and half's delay—to Dec. 30, 1961—in lamp marking requirements (Sec. 193.25-d). Delay would give SAE time to finalize its now-being-worked-on marking code, and manufacturers would be able to use up existing stocks.

"Voltage drop" due for change

AMA's petition also points out that the voltage drop rule (Sec. 193.27) as now written requires up to 13.5 volts at the lamp in a 12-volt system, 6.5 in a 6-volt system . . . both a practical impossibility so some change is all but a certainty. In addition, AMA is asking for modification in driveway lighting requirements to avoid marring of vehicles.

Meanwhile, American Trucking Assns., vociferous on these and other parts of the new rules, is gathering comment from fleet operators. As things stand now, it expects to file its detailed complaint with the Commission sometime in May. (For further comment, see page 5, this issue.) Truck and bus fleet operators are further reminded that three other major changes to the Commission's Safety Regs are still pending. These involve driving rules and hours of service (Secs. 195.1 through 195.12), accident reporting and record keeping (Secs. 194.2 through 194.9) and vehicle equipment and accessories (Secs. 193.50 through 193.96).

Congress eyes exhaust law

Pending enactment of an anti-smog vehicle exhaust law in California is spurring some members of Congress and the Administration (Mar., page 34) to push for federal legislation in this area. If it parallels what California expects to have here's what you could get: Your fleet's exhaust systems would be required to meet certain "standards." They could not discharge "air pollutants" sufficient to be "irritating to the senses or harmful to the health and well-being of human beings." To make the law workable, there'd be a laboratory and staff to set the "standards," approve exhaust systems, develop and administer enforcement programs. You would also be faced with (1) police checks for compliance, (2) fines for non-compliance and (3) periodic exhaust system inspection.

DETROIT DISPATCH

STEEL PRICE increase across-theboard is not likely until the end of this year, says IRON AGE. Reason, aside from this being an election year, is competition—from imported steel, from other materials and between steel producers.

GAS TURBINE engine news includes announcement by Ford that its prototype Model No. 704 will be installed in a heavy-duty truck for testing during the coming months. Allison will try-out GM's 225-hp turbine in a Canadian open pit mine operation. Installation will be in a 32-ton off-highway truck negotiating 8 per cent grades.

TANK TRUCKS WITH partial load are easier to stop than when fully loaded—even with unbaffled tank, says Heil Co. Trick is to keep braking effort constant, not be caught off guard by the surge. Heil says same principle applies in gear shifts and acceleration.

AMBER TURN SIGNALS are more visible both day and night than white turn signals of the same candlepower, reports Automobile Manufacturers Assn. Sun reflection can kill white signals in daytime and amber signals contrast more with headlamps at night. AMA is asking state vehicle administrators to amend their laws to permit amber front turn signals.

TAPING ACTUAL highway conditions and reproducing them on a shop dynamometer for vehicle testing is possible, says Perfect Circle Corp., Hagerstown, Ind. It's producing a unit called HyTReSS that does the job.

RENAULT LIGHT truck gets introduced to the U.S. market middle of this month. It will be at the International Automobile Show, April 16-24, The Coliseum, New York City.

NEW DIESEL ENGINE will also be on display at the Show. It's the Model No. DS575 made by Van Doorne's Automobielfabriek of Holland. The turbocharged, 4-stroke, 6-cyl engine has 3.96 by 4.75-in. bore and stroke, 16 to 1 compression ratio and 351-cu in displacement.

FALCON TRUCK BY Ford came on the market late last month. It's a Rancherostyle pick-up. There's a picture and more details on page 398, this issue.

NYLON CAGES FOR thrust bearings are being produced by Garlock Packing Co. Main advantage of the fiber glass reinforced component is that tramp metal invading the bearing area imbeds itself in the nylon.

FRUEHAUF HAS redesigned frames of its flatbed trailers to boost their rated payload capacity and cut weight.

WASHINGTON WATCH

AVAILABLE LABOR IN the 25 to 44 age group may not be sufficient to meet the demands of the next 10 years. During the decade, says U. S. Dept. of Labor, number of workers in that age group will drop 1 per cent. In other words, available supply won't meet normal replacement. If you're looking to expand, you'd better sharpen your recruiting, find a place for older or younger workers.

IRREGULAR ROUTE common carriers will ask Interstate Commerce Commission to abolish distinction between regular and irregular route operation. Action, decided on at last month's meeting of the IRCC Conference, will take the form of a petition for consideration in the now pending Ex Parte MC-55.

SUPREME COURT HAS been asked by railroads to upset anti-trust decision in favor of truck fleet operators. District Court's decision was affirmed by an Appeals Court last December (Jan., page 34). Railroads now say decision in favor of truck operators endangers their right to "freedom of speech."

MINIMUM WAGE IS likely to be boosted to \$1.25 an hour before Congress finishes this year's session. Also possible is extension of the law's overtime provisions to include transportation workers.

SEALED TANKS ABOVE 1000-gal capacity are tank truck equipment and you need tank truck authority to use them, according to a recent ruling by

TWO-WAY RADIO home study operating and service course is announced by Motorola. Described as a "highly-specialized" course, it assumes the student will already have electronic know-how and experience sufficient to pass an FCC technical license exam. For details, write Motorola Training Institute, 4501 West Augusta Blvd. Chicago 51, Ill.

SILICON RECTIFIERS FOR use with alternators are being pushed by Tung-Sol. Maker anticipates greater use of alternator systems on 1961 passenger cars.

MORE ALUMINUM engines? Word is that within two years you can expect to see an in-line 6 and a V-8 from Chrysler, a V-4 and a V-8 from Ford, an in-line 6 from American Motors, and two V-8's from General Motors—one for Chevrolet and one for the compact Buick, Oldsmobile and, possibly, Pontiac.

ALLIED VAN LINES, national household goods carrier, is among the latest fleets to announce try-outs of double-bottom combinations on the New York Thruway.

ONE-PIECE TRAILER ROOF IS now possible, says Alcoa. It has just put into use facilities for rolling aluminum roofing sheet 96 in. wide.

an ICC examiner. The collapsible rubber tanks above 1000-gal capacity do not fall into the category of equipment which general freight carriers are permitted to use, the report said.

BUS LINES AND Military Traffic Management Agency of the U.S. Army have agreed on an operating plan in case of national mobilization. Bus lines were represented by the National Bus Military Bureau of the National Bus Traffic Assn. Some 244 bus lines are included.

YELLOW CAB IN San Francisco says its cost-per-mile is just under 8¢. Breakdown for the 1668-cab fleet is 1.76¢ for maintenance, 1.0 for depreciation, 1.8 for insurance, 2.03 for gas, oil and tires and 1.39 for license fees.

TRUCK TONNAGE

ronnage index for 1959 stands at 199, reports ATA's Research Dept. It's a new record and almost double the base—1947-1949 average = 100. (See page 256, this issue, for details.) Fourth quarter, 1959, closed the year with 4.3 per cent more tonnage than the same period of 1958. (For regional and commodity details, see page 415, this issue.) And the year opened well. January, 1960, intercity truck tonnage was 3.7 percent ahead of

Menth	% Change from Previous Month	Change from a Year Age		
January, 1960	- 2.1	+ 3.7		
Full Year, 1959		+13.1		
4th Quarter '50		+ 4.3		
December, 1959 Nevember, 1959 October, 1959	+ 5.8 -12.2 + 1.4	+ 8.7 + 8.4 + 3.4		
3rd Quarter '59	-	+10.9		
September, 1959 August, 1959 July, 1959	+ 6.2 - 3.5 - 4.2	+13.7 +17.3 +18.9		
2nd Quarter '59		+20.5		
June, 1959 May, 1959 April, 1959	+ 4.2 - 1.1 + 1.9	+21.6 +20.4 +25.2		
1st Quarter '59		+15.6		
March, 1959 February, 1959	+13.2 + 2.2	+25.0 +17.6		

was 3.7 percent ahead of January, 1959. Only region not showing a 1960 improvement over 1959 was the Pacific region.

TRUCK AND BUS PRODUCTION

	Works		Year to Date		
Make	Mar. 12	Mar. 5	1980	1959	
Chevroitel G. M. C. Diamond T Divos Dodge and Fargo Ford F. W. D. International Mack Studebaker White Willys	10, 340 2, 377 43 100 1, 646 7, 808 19 2, 971 28 270 407 2, 927	10, 257 2, 897 51 100 2, 082 6, 599 26 2, 912 292 393 400 2, 382	108, 352 25, 015 855 840 18, 962 81, 544 248 27, 251 3, 924 2, 192 4, 061 25, 880	81,388 18,751 1,443 724 18,235 65,820 229 25,162 3,574 3,619 3,684	
Other Trurks	85	85	790	708	
Total - Trucks Buses	28,821 35	28,156 55	300,614 805	248,939 461	
Total-Trucks and Buses	28,856	28,211	301,419	247,400	

Seurce: Automobile Manufacturers Asen.

IN THIS ISSUE

... You'll find more fleet reference data than in any other magazine. It's presented in quick reference, easy-to-use form. Here's where to look:

Page 95—MAINTENANCE—all-in-one-place for each make, here's complete service and tune-up data for 1960's trucks, buses, engines, fleet passenger cars.

Page 255—**STATISTICS**—at-your-finger-tip facts on the size of the industry you are a part of—tonnage, trucks, buses and trailers.

Page 273—OPERATIONS—most up-to-date summary of the rules—sizes and weights, safety equipment, vehicle inspection, mud guards, highway-use taxes.

Page 305—SELECTION—To help you spot the equipment you need, here's what's available in trucks, buses, engines, transmissions, trailer suspensions.

Page 337—**TRAINING**—Completely revised for this issue, check lists of the maintenance manuals and films you can use in your training program.



A QUICK LOOK AT WHAT'S COMING TO HELP WITH YOUR ADVANCE FLEET PLANNING

SEVERAL MEETINGS OF more than usual interest to fleet operators are slated for later this month and early in May. Here's the when and where—and a list of program topics. Check 'em off to see which affect your job:

ATA Heavy-Specialized Carriers Conference, Netherland-Hilton Hotel, Cincinnati, Ohio, April 21-23—state regulations, overhead clearances, labor relations, return loads, interchange, piggy-back, containers, insurance.

ATA Local Cartage National Conference. Hotel New Yorker, New York, N. Y., April 24-28—illegal operation, insurance, labor, small shipments, commercial zones, distribution tariffs, leasing, piggy-back, profits.

ATA Operations Council, Shamrock-Hilton Hotel, Houston, Texas, May 1-5—dock supervision, vehicle utilization, freight handling equipment, microwave communication, containers, terminal planning and construction.

ATA Council of Safety Supervisors, Beverly-Hilton Hotel, Los Angeles, Cal., May 10-12—medical advice for accident prevention, handling of dangerous articles, ICC Safety Regs, uniform driver rules in labor contracts.

Highway Transportation Congress (National Highway Users Conference), Hotel Mayflower, Washington, D. C., May 10-12—what's ahead for highway transport in the coming 10 years—taxes, highways, laws, reciprocity, safety.

MORE MAIL WILL move by truck this year, Post Office officials reported to Congress last month. Mail tonnage is expected to be almost 20 per cent greater than last year, with 7.3 per cent of the boost slated to go by highway transport. Air carriers get the big share—11.2 per cent and railroads only 1.3. Truck bite could be greater if proposed rates (10¢ per ton-mile on an if-space-available basis) under which one out of four regular first class letters would move by air do not materialize.

JANUARY data shown below on major fleet items get 1960 off to a good start. Everything's ahead of the same month a year ago—except new truck registrations. Even here, heavier trucks show gains with registrations of lighter models causing the lag. (For full details on 1959, see page 255.)

In thousands of units, sexcept bus sales are in actual numbers January January January				Truck and Bus Tires			
	Truck Trailer Shipments	Bus Factory Sales—Domestic	Replacement Shipments	Original Equip. Shipments			
	January	January	January				
1960	58.2	96.2	6.4	338	826.1	421.0	
1959	61.8	31.4	4.6	112	714.1	329.0	



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Keep your shop up-to-date with Hein-Werner SWIFT-LIFTS — they have more of everything you want that's truly new and soundly engineered.



The complete Hein-Werner line includes: The famous "55" and "Screwball" . . Under-Axle Jacks of 1½ to 100 ton capacity . . "Bumper-Lift" and Ratchet Jacks for passenger cars . "Swift-Lift" Service Jacks for shop use . . Transmission Jacks . . Adjustable Stands . . "Push and Pull" and "Pushmaster" jacks for body, fender and frame repair work.

"Wherever we go, Wards on-the-spot nationwide service is there when we need it".

says Don Coffman, Purchasing Agent, North American Van Lines, Ft. Wayne, Indiana





North American Van Lines rely on Wards guaranteed Riverside HI-WAY TRUCK TIRES

WARDS

When you buy tires, look for the *Plus* behind the price! When you buy Riverside tires, our responsibility to you begins . . . because every Riverside tire must deliver the service you have every right to expect. Says Don Coffman, "It's a relief to know that we can depend on Wards service throughout the United States". Mr. Trucker, look for the *Plus* . . . compare price, quality, guarantee anywhere —you'll agree, Riverside guaranteed truck tires are your best buy!

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"THOMPSON POSITIVE VALVE ROTATORS WILL CUT YOUR TON-MILE COSTS!"

"You can specify positive rotators installed in engines at the factory when ordering your new trucks.

"And you can put them on your present rigs, too, at the next scheduled engine overhaul."

These inexpensive exhaust valve rotators pay for themselves in short order! Here's why:

Exhaust valve life is increased up to 8 times!

Valve overhauls and unscheduled repairs are substantially reduced.

Burned or stuck valves are practically eliminated. Engine compression and fuel economy stay at tune-up peak far longer.

Valve stem and guide wear is reduced.

The sum-total is lower ton-mile costs. Only a positive valve rotator will do it...only Thompson makes them! MAKE SURE YOUR NEXT TRUCK ORDER SPECIFIES THOMPSON POSITIVE VALVE ROTATORS!





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"We cut road delays in half when we switched to nylon cord tires!"

says William Adcock, Dir. of Maintenance, Ringsby Truck Lines, Inc., Denver, Colorado

"Nylon cord tires give us better service at lower cost per mile... our records actually show that nylons reduce road delays by 50%, save us plenty in repair costs! The nylon carcass is so tough that it can be recapped oftener, too. And nylons are safe... we've practically ended blowouts due to impact breaks. Safety plus economy is a hard combination to beat—so we've made a 100% switch-over to nylon!

"At Ringsby, our fleet of over 600 sleeper tractors and trailers travel routes from Chicago and St. Louis to Los Angeles and San Francisco. This means our vans have to climb over 11,000 feet to go through rugged Rocky Mountain passes, in temperatures that can go as low as

30° below zero... then travel down to cross the salt flats of Utah and the Nevada desert, in temperatures that can go as high as 120°! We have to have a tire that can take plenty of punishment... a tire we can depend on. That's why we ride exclusively on nylon cord tires."

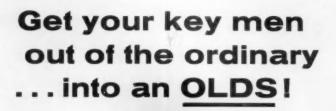
PROVE TO YOURSELF that the advantages of nylon cord tires add up to big savings under any road and load conditions. Ask your dealer about nylon cords today. All tire makers use nylon in their better tires.

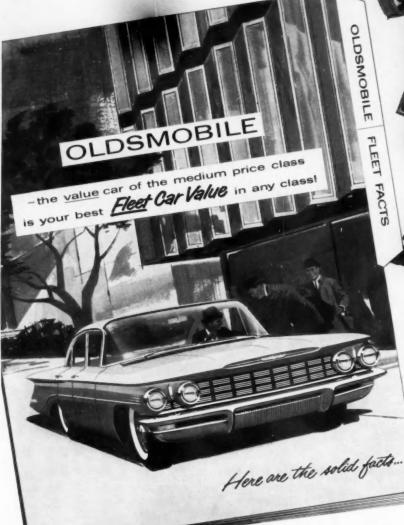


BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

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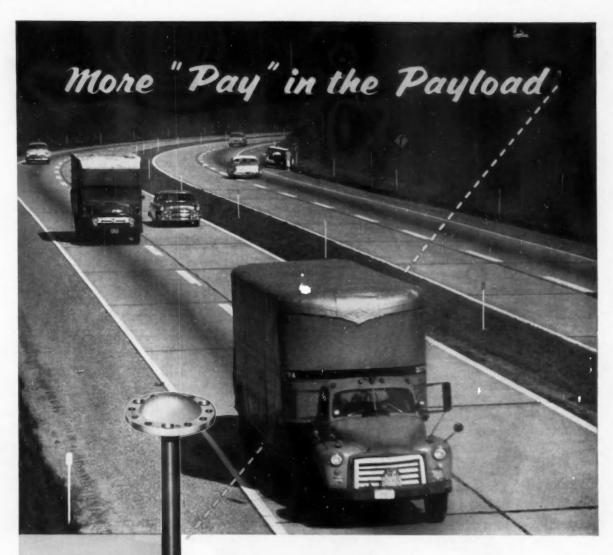
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It's free...and filled with information you'll find useful! Get your copy at your local authorized Oldsmobile Quality Dealer's . . . or write to Oldsmobile Division, General Motors Corp., Lansing 21, Mich.

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to provide your company executives with transportation that's in keeping with their positions . . . beneficial to their comfort, safety and efficiency! Increasing numbers of key management men, sales executives and car rental and leasing operators are discovering that the '60 Oldsmobile is today's smartest fleet car. And Purchasing Agents are finding it the smartest fleet buy! Get the facts from your dealer today!

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The proof is in the profits and U.S. Axle Shafts

have racked up records of increased profits for fleet operators everywhere, through reduced replacement costs. Finest alloy steels, precision-manufactured by exclusive U.S. processes, guarantee "extra-duty" durability for longer mileage without breakdowns. Minimize costly replacements with U.S. Axles—toughest, longest-lasting shafts on the market!

Your U.S. Axle Jobber can supply the exact axle shaft replacements for your fleet for immediate delivery!



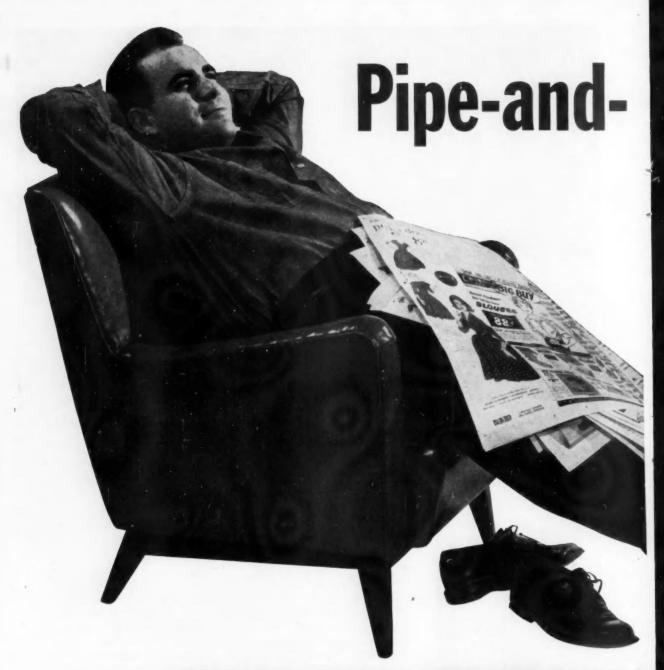
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LEFT: The 1960 PURE TruckStop directory is your guide to the finest stops on the road. It's available free at any PURE TruckStop or by mail on request.

RIGHT: NEW! Wallet-size plastic truck credit card gives you the best possible control over purchases. Eliminates errors, saves valuable time for drivers, too.





COMMERCIAL CAR JOURNAL, April, 1960

slippers comfort!

That's what drivers find at 240 PURE TruckStops from Minnesota to Florida,

from the Dakotas to the Eastern Seaboard

A rested, relaxed driver is a happier (and safer!) driver. That's why, nowadays, there's no more welcome sight to a road-weary truck driver than the familiar blue and white PURE TruckStop sign. It means a chance to stretch out with a newspaper, eat a hot, hearty meal, watch TV, as well as get a good night's sleep in a clean, comfortable bed.

This sign means top-quality truck products, too. PURE Truck-Tested gasolines, diesel fuels, motor oil and lubricants, tires, batteries and safety equipment.

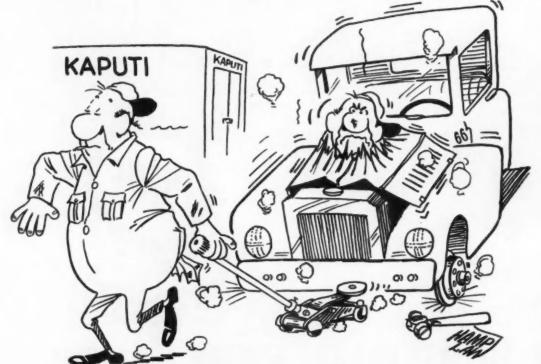
Schedule all your stops at the big blue and white PURE sign-where drivers find real pipe-and-slippers comfort-service fit for a king.



45

Even though you mean to put it back...





Look underneath before borrowin' that jack!

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Do you know the facts about

OIL COLOR?

The **PROOF** is on the dipstick...

Hastings Oil Filter Cartridges

clean the oil and keep it clean

Many operators take it for granted that crankcase oil might be dark, particularly with detergent oils. They don't realize that ANY darkness means dirt . . . dirt means abrasives . . . abrasives mean wear.

You can see this dirty oil on the dipstick. Install a Hastings Oil Filter Cartridge. Then, on the next dipstick test, you can prove for yourself that the Hastings Cartridge has kept the oil clean.

You can depend on Hastings to keep oil clean from filter change to filter change.* The reason is Densite, an amazing filtering material composed of millions of pressure-packed cotton fibres that absorb dirt far beyond the capacity of ordinary filters.

Use Hastings Oil Filter Cartridges for every filter change. It pays off in longer engine life . . . better engine performance . . . fewer service requirements.



*Proved by tests conducted under supervision of Pittsburgh Testing Laboratories, in accordance with U. S. Bureau of Standards procedures. U. S. Patents 2,797,811, 2,584,771.



No. 501-M Replacement for Deluxe Sock Type

Here's a metal-encased cartridge with built-in sump. No messy sumps to clean—no bags to tear—no over-run cartridges to dig out—no adapters to add. Simply pull up... cartridge and sump come out together. All models have Densite filtering material to keep oil clean always.



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Here is how PaH can offer you the lightest, most compact diesel engine available. Crankcase, housings, covers, pans, manifolds, bearings, even the push rods are made of light weight aluminum alloy, saving you up to a half ton over engines of outdated cast iron construction. In some cases, this weight saving alone can amortize the entire cost of a PaH diesel in one year. No other engine can give you time tested and proved aluminum construction.

Serviceability is also unmatched with P&H diesels. Consider the cost savings in these features:

- 25% fewer parts
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- One size bore and stroke on all engine models
- Simplest fuel system available (one adjustment times the entire engine)
- "Unitized Power Assemblies"

After thousands of running hours, you can easily remove a complete "Unitized Power Assembly" (head, liner, piston, rod and water jacket)—and replace it with a new one—in less than an hour. No need to even drop the pan, detach manifolds or disturb engine mounts.

Specify modern P&H Diesel power on your new equipment. For more information, contact your P&H dealer or write for bulletin Z-42.



P&H Model 487H-18 AT rated 220 Hp at 1800 RPM, weighing only 1500 lbs. or 6.82 lbs. per B.H.P. Available in 3, 4 and 6 cyl. models to meet all your trucking needs.

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Fleet operators are business men first and always. Profits...losses... costs means more to them than enthusiastic claims about new methods of power transmission or conversion.

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Lipe Heavy-Duty DPB Clutches are available in single and two-plate types: 12", 13", 14" and 15" sizes; with torque capacities from 300 to 1900 ft.-lbs.



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SPaulding 2-6500



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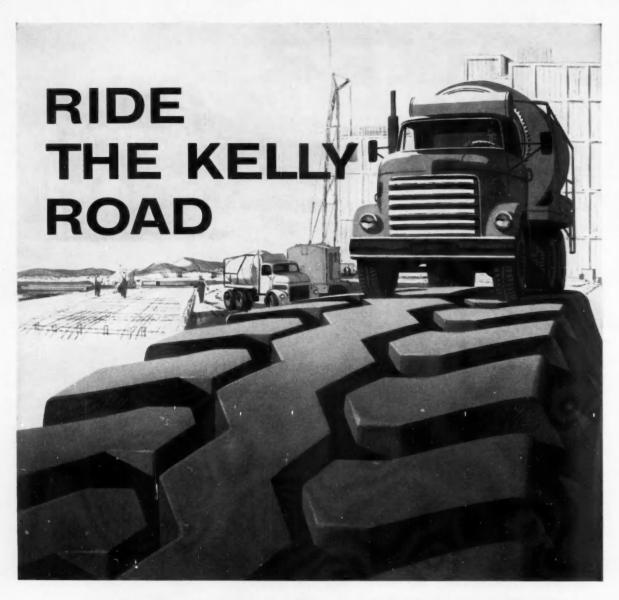






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Gives sure traction off the highway; rolls smoothly on. Extra heavy tread of exclusive Armorubber resists chipping, tearing. Nylon-cord body. Tubeless or tube-type. KELLYS CUT BREAKDOWNS. Reports Joseph F. Klawitter, owner of Klawitter Trucking Co., Cincinnati, Ohio: "Truck equipment and drivers cost money, but a road breakdown costs you your profit. We have reduced our breakdowns by better than 65% since we began using Kelly C.H.T. and Kelly Dual Trac Nylon Tires. Our service to customers is better, our profits are better."

See for yourself what a difference these rugged tires make. Get your trucks on the Kelly Road!

KELLY Opringfield TIRES PROVED AND IMPROVED FOR 66 YEARS!

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ONE OF THE "400" LARGEST AMERICAN CORPORATIONS

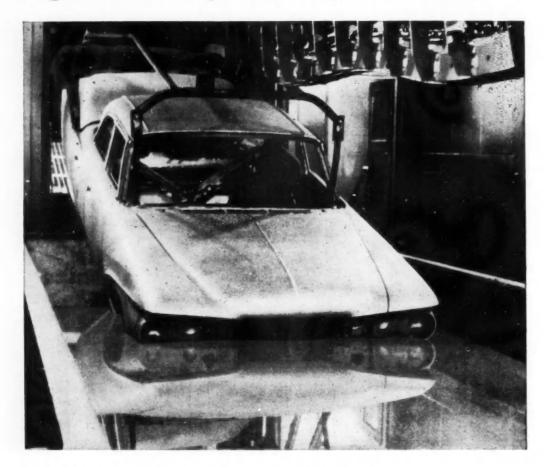
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CONTROLS

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DIE CONSOLIDATED CASTINGS TRANSPORTATION EQUIPMENT

The life expectancy of Solid Plymouth Fleet Cars is around 200,000 miles. The big reason why—Unibody construction.



Plymouth Fleet Cars are built to last.

You probably won't keep a fleet car for 200,000 miles, but that's not the point. Every Plymouth Fleet Car is built to really last—built a new way, the solid Dura-Quiet Unibody way. Approximately 5400 precise welds join tough steel of body and frame into one unit. This should let you keep fleet cars a long time. You can also expect high resale value when you trade or sell.

They promise low upkeep costs.

Seven different baths, like the one shown above, give each Solid Plymouth Unibody a new kind of rust protection. Every Unibody also receives six chemical sprays. This solid combination of protective baths and chemical sprays cuts body corrosion and maintenance 'way down.

They're low in price.

Plymouth Fleet Cars are reasonably priced. The four Fleet Special models keep the solid fundamentals, yet eliminate the unnecessary trim many fleet owners don't want anyway. Solid fundamentals like tough, durable Vinyl interiors and heavy-duty door trim panels.

Plymouth Fleet Cars offer much more, too.

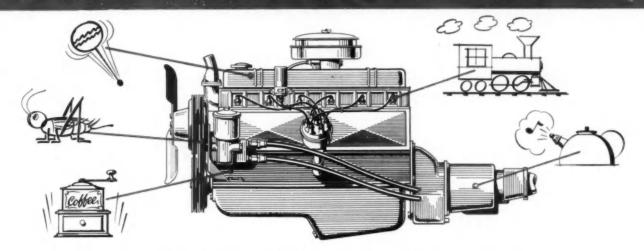
There's good gasoline mileage, rugged standard equipment, wonderfully smooth Torsion-Air Ride, and more in the Solid Plymouth Fleet Cars. Models range all the way from the Plymouth Fleet Special – a no-frills workhorse, to the Plymouth Fury – the most luxurious Plymouth of them all. Wouldn't it be a good idea to see your Plymouth dealer today?

A Chrysler-engineered product, built a new solid way to give you solid satisfaction.

SOLID PLYMOUTH 1960



MONEY-SAVING IDEAS FOR AMERICA'S FLEETS



CRICKETS AND COFFEEMILLS and what they mean in your engine

Your fleet vehicles aren't hi-fi stereo sets, but it's good sense to listen to them once in a while anyway. Every little squeak has a meaning all its own, and can clue you in on some things that are going to need attention soon. Here are some characteristic noises, and a rundown on what they may mean.

COFFEEMILL WHIRRING sound that gets more pronounced when the engine speeds up, and which comes from the lower front end of the engine, is an almost certain indication that the timing gears are worn, and will need replacing soon.

CRICKET CHIRPING under the hood can mean that the belt on the fan or power-steering is loose and slipping. If cars make this sound only when cold or on hard, slow-speed turns, there's no real problem. But chirping under any other conditions means you should tighten it up, apply some rubber dressing to the belt, or replace it, depending on how persistent the noise is.

TEAKETTLE WHISTLE from the automatic transmission may mean that improper fluid level has let air into the works. This can happen when the fluid level is too low, or when there's too much fluid and foaming has resulted. If the transmission makes like a teakettle even when the dipstick shows just the right fluid level, specialized transmission service is indicated.

CHUGGING can be caused by weak or misfiring spark plugs. Before you take them out for cleaning or replacement, however, try a tankful of Sky Chief gasoline, and a series of full-throttle accelerations. The Petrox additive will sometimes restore misfiring plugs to normal performance.

RATTLING IN VALVES occurs when cams clatter against valve lifters. Some valve rattle is typical of all OHV engines, particularly in an engine with hydraulic valve lifters for about five minutes after starting cold. But an educated ear can tell you when the clatter gets too loud or too long—and the article on the last page of this issue of Lube Logic tells you how you may be able to correct valve clatter without tearing down the engine.

Wheels and chassis produce tell-tale noises, too, and we'll tell about them in a forthcoming issue of Lube Logic.

ALSO IN THIS ISSUE:

Trailin' the Mail with AL

3 new "Sleepers"

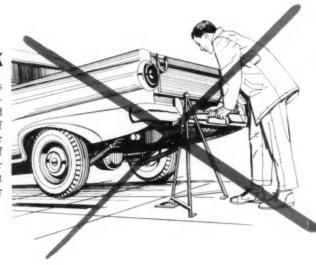
WHAT'S NEW FROM DETROIT

Soothing syrup for noisy valves

LUBE LOGIC COST-CUTTING 'SLEEPERS' OF THE MONTH

A limited-slip differential can walk away with your truck

Jacking up one rear wheel of a truck and engaging the gears with the engine running is a quick and easy way to double-check brakes, bearings or rear-end. BUT if the truck is equipped with a limited-slip or locking differential, it'll drive right off the jack, because it's designed to send all the engine power to the wheel with the most traction. There's no easy way of telling from the outside whether a truck has conventional or locking differential, but more and more of them are being built with the locking type. If you're not sure, jack up both rear wheels and don't try to find it out the hard way.





Engine performance knocked by a cocked cap

A cocked cap on the distributor may look sporty but it can cause extremely rough operation, even if the cap itself is in good condition. When the cap is cocked, the rotor segment may be contacting the inserts metal-to-metal on one side and not at all on the other. If your engine is running rough, check this out before you do any heavy work.



DEAR AL.

In the last issue of Lube Logic there was an article about washing a car before you grease it. That's not the way I do it, and here's why: (1) No self-respecting chassis lubricant would wash away under the pressure supplied by a hose; (2) and even if it did, you don't wash the underside of a car, so the grease fittings aren't any cleaner than they were before you washed the car; (3) there's no danger of getting water in the crankcase filler because, if you grease first, you'll be able to replace the filler cap if it's missing.

K.P.T., New York, N.Y.

Thanks very much for your ideas — but I still think you're better off washing first, then lubricating. First off, the best way to get water out of spring shackles and ball sockets is to force it out with more grease. Second, even if the crankcase filler cap is in place, you can get water in the distributor housing, vent pipe on the automatic transmission and the vents on the rear axle. If you lubricate after you wash, you can check all these critical spots and make sure they're protected right.



Tale your tail-pipe can tell you

Next time you find yourself on your hands and knees behind one of your cars, peek into the tail-pipe. It has a story for you about what the engine's been doing with the gasoline you've been feeding it. Here's what to look for, and a couple of probable causes for each symptom:



 Grayish-white deposit at the end of the tail-pipe means all is well. Go find another problem.



An oily black deposit is a reliable indication of oil-burning. Better check the rings.



A sooty black deposit could mean several things. Maybe you're running on a fuel mixture that's too rich; or maybe the air filter is clogged with dirt so the

fuel mixture is actually richer than your carburetor adjustment would indicate; or, maybe the spark plugs are fouled, or worn out and need replacing.

WHAT'S NEW FROM DETROIT



IN CERTAIN 6-CYLINDER TRUCKS: Torn or leaky distributor diaphragm can give very poor performance due to lack of distributor advance. To check out, first connect timing light, observe timing marks on crankshaft pulley; second, gun the engine a few times to see if spark advances. If it doesn't, check for defective distributor diaphragm.

AUTOMATIC TRANSMISSIONS, ALL TYPES: A special precaution on oil. Rebuilders of automatic transmissions report that at least 50% of transmission failures were caused by reliance on certain types of oils to stop leaks, swell seals, remove gum, etc. It's true those oils will swell leaky seals and stop leaks for a while, but they swell all the other seals too. Result: premature failure of all seals and more expense than you would have had in the first place. Any qualified transmission fluid contains all the protective properties you'll need.

with AL

*

Shoot in your puzzlers to "Trailin' the Mail with Al," at Texaco's Fleet Sales Division, 135 East 42nd Street, New York 17, N. Y. There's a real fine group at the Division — ready to serve every "on-wheels" fleet from coast to coast.

DEAR AL,

I never heard of one like this before. My pickup conked out after running about 50 miles on a brand new set of spark plugs. When they tore down the engine at the shop, they found a hole the size of a quarter burned through the top of #1 and #6 pistons, and the center electrode on both plugs was burned up completely. Any clues about what happened, and anything I can do so it won't happen again?

L.R.S., Lingle, Wyo.

Your piston with a hole in the head sounds like a classic case of pre-ignition. A lot of things can cause pre-ignition—sustained full-throttle driving, too lean carb mixture, poor water circulation around the cylinder head, over-advanced ignition timing. But most probably you're using plugs that are too hot for your kind of driving.

Hot plugs are fine for stop-and-go driving. They've got a long internal insulator that runs hot, so deposits burn off before they can cause fouling. A cool plug — which is just fine for high speeds or heavy loads — is designed to get the heat away from the electrode fast. A cool plug will foul up faster than a hot one in stop-and-go driving, but if an engine has hot plugs and you drive it at sustained high speeds, or heavily loaded, you're just asking for pre-ignition troubles.

In your case the clincher is the condition of the plug. When the special heat-resistant alloy of the electrode burns up, you can be sure you're using plugs that are running much too hot.

LUBE LOGIC

Soothing syrup for noisy valves

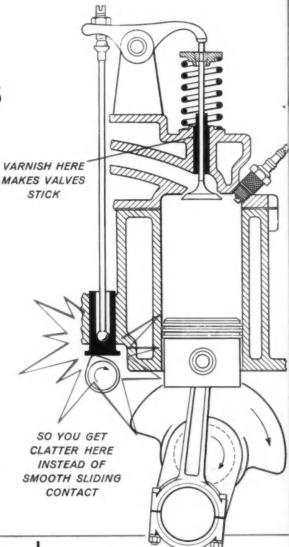
Valve clatter can mean a costly trip to the shop if you ignore itbut sometimes it's hard to tell how much valve noise is too much. Some valve clicking is audible practically all the time in OHV engines with mechanical lifters, particularly after a cold start. OHV engines with hydraulic valve lifters should be quiet when they're warmed up, but right after a cold start they clatter for a minute or two until oil pressure builds up inside the lifters.

To make sure it's the valves that are misbehaving, take off the air filter and lend an ear at the carburetor air intake. A put-put sound means an intake valve is stuck partly open. Run around to the back of the car and listen to the exhaust; an irregular throb at the tailpipe indicates a stuck exhaust valve.

But don't despair if all the signs point to a valve problem. If the situation hasn't progressed too far, there's a low-cost Texaco cure that can put you back in the running.

Add some Texaco Super Motor Detergent to the oil that's in your crankcase now. It'll flush away the gum and varnish created by unburned fuel - and it's varnish, either on valve stems or inside hydraulic lifters, that produces clatter by preventing freeand-easy valve movement. Run the engine about 30 miles or 30 minutes and drain out the mess. When you refill, add more Texaco SMD to the new oil. Drain again after about 500 miles. to make sure you're not circulating a lot of loosened sludge through the engine. Refill again with a high-detergent oil and you're on your way.

This little routine may save you at least \$50 - about what it costs to have the lifters removed and cleaned by hand. If you use Texaco SMD regularly, you can postpone engine wear and lifter sticking indefinitely.



IT'S YOURS-FREE! Texaco guide to the only national system of 24-hour truck stops



This handy little booklet lists all those Texaco truck stops that are open 24 hours a day, and offer both gasoline and diesel fuel. Includes all the important details on 300 Texaco service facilities located coast-to-coast, from Canada to Mexico. Also gives you up-to-date information on economics and cost-control in fleet operation. And it's just the right size to slip into your jacket pocket or the glove compartment. To get your free copy, tear out this item, jot your name and address in the space below, and send it to Texaco Inc., Fleet Sales Division, 135 East 42nd Street, New York 17, N. Y., Dept. CCJ-72.

NAME. COMPANY.

ADDRESS.

*TEXACO AUTOMOTIVE **ENGINEERS**

Every month we'll bring you news about the latest "doings" in servicing and

lubricating your trucks. We'll also bring you "sleepers," little angles, easy to overlook, where big savings in money and time can be made. But month in, month out, your local TAE* is the best source for money-saving lubrication ideas. Don't forget that "lubrication is a major factor in cost control." Texaco Inc., Fleet Sales Division, 135 East 42nd Street, New York 17, N. Y.



ment; bicycles and velocipedes; Evanite® plywood, hardboard and Plywall®; EVANS PRODUCTS COMPANY ALSO PRODUCES: Railroad loading equip-Evanite Battery Separators; Haskelite building panels, Plymetl® and doors.

REGIONAL REPRESENTATIVES:

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EVANS PRODUCTS COMPANY RICHIBAN

AG Proved Best



New AC Fire-Ring Spark Plugs are designed and constructed to stand up under condi-tions that are far more demanding than required in actual service.

The comparison chart on the opposite page proves this fact. It shows what happens to an AC Fire-Ring and another spark plug when they are subjected to the same rugged tests. ACs proved best—in test after test!

You can see these tests at AC Clinics now being conducted throughout the country. Or, you can simulate the same tests in your own laboratories or shops. You'll be con-vinced that AC builds an extra margin of reliability into new Fire-Ring spark plugs . . . the spark plugs that are made "truck tough" for outstanding performance and important money-saving economy.

Get "TRUCK TOUGH" AC Fire-Ring Spark Plugs

In Test After Test!

TYPE OF TEST	TEST DESCRIPTION	AC FIRE-RING TEST RESULTS	OTHER SPARK PLUG TEST RESULTS	During installation, ACs resist accidental blows that easily damage ordinary spark plugs.		
DROP	A 2-pound, 10-ounce steel weight is dropped 12 inches, first on an AC Fire-Ring—then on another spark plug.	Remains intact — un- marred and ready for action.	Cracks and falls apart to become completely useless.			
PRESSURE TEST	1400 PSI pressure applied under water, first to an AC Fire-Ring—then to other spark plug.	Remains gas tight—no bubbles occur.	Steady stream of bub- bles indicates failure of inner seal.	ACs maintain a gas- tight seal assuring uni- form heat range and longer electrode life.		
PULL APART TEST	Steadily increasing "pull apart" action puts both the AC Fire-Ring and the other spark plug to the test.	Remains intact — resists breakage.	Separates to indicate structural weakness under tension.	ACs are built to take it with an extra margin of built-in strength.		
BLOW TORCH TEST	2000°F blow torch flame tests "heat up and cool off" ability of both AC Fire-Ring and other spark plug.	Heats up rapidly—cools off rapidly.	Heats up—and cools off more slowly.	ACs heat faster to stay clean longer, resist foul- ing—cool faster to pre- vent costly pre-ignition.		
FLASH-OVER TEST	Equal high voltage to induce flashover condition is applied to both an AC Fire-Ring—and to other spark plug.	Flash-over takes place less frequently and often does not occur.	Flash-over condition is immediately and consistently evident.	AC's superior insulato design of sharp, deeply cut ribs resists flash-over to prevent power loss		

SAVE IN THE LONG RUN WITH AC QUALITY!

No doubt about it. You get extra built-in quality in many ways with AC Fire-Rings on your trucks. You reduce the chance of damage and loss of power from accidental blows. You get extra toughness and strength under severest operating conditions, proper heat range all the time. Your spark plugs heat faster and cool faster for cleaner burning long life. You retain the peak power that means reliable performance, and lower costs per mile for maximum savings in the long run.

They must be the best!

AC PRESENTS THE ART CARNEY SHOW, NBC-TV, MAY

AC SPARK PLUG A THE ELECTRONICS DIVISION OF GENERAL MOTORS



Chevy has more pluses under the hood for more dependable fleet operation!

There are some powerful reasons why more fleet buyers depend on Chevrolet than any other car.* No other lowpriced car offers so many pluses that add up to dollar-saving dependability—like positive-shift starting for surer starts, hydraulic valve lifters that reduce maintenance, automatic choke for more economical warmups. Next time you're by your dealer's take a shrewd fleet buyer's look under the hood at Chevrolet's ever-faithful Hi-Thrift 6—and see all the extras you get at no extra cost:

HYDRAULIC VALVE LIFTERS—oilhushed, they eliminate periodic tappet adjustments.

FORGED STEEL CRANKSHAFT—extra strong for extra long life.

POSITIVE-SHIFT STARTING—eliminates gas-wasting false starts.

AUTOMATIC CHOKE—meters fuel more economically during warmup.

CONCENTRIC CARBURETION—keeps your engine spunky under driving conditions where others sputter.

ECONOMY-CONTOURED CAMSHAFT—for top gas mileage.

REGULAR-GRADE FUEL—peppy performance on regular gas.

OIL-WETTED AIR CLEANER—saves cost of replacement element.

4,000-MILE OIL CHANGE—long engine life with less maintenance.

DESIGNED FOR EASY SERVICING—cuts downtime to a minimum.

Chevrolet Division of General Motors, Detroit 2, Michigan.

The car America likes to do business with!



*Latest annual registration count by R. L. Polk & Co. shows 45.12% of sales to fleet buyers of 20 or more units were Chevrolets—nearly half again as many as the second-choice fleet car.



Just 24 minutes with this movie can save hundreds of man-hours in your plant

If you're concerned with cost control, don't miss Texaco's movie about grease, called "Shear Magic."

There's no hard sell in "Shear Magic." It's devoted entirely to helpful information on ways to cut the cost of maintenance and prevent unscheduled downtime.

A well-planned grease schedule can extend equipment life and cut repair costs and you can bring this message home to your maintenance men by having them see "Shear Magic." This movie suggests ideas for planning the grease schedule that best fits your operation. And it reminds the men that properly choosing and applying greases helps their company, because it assures tighter control of maintenance costs.

A Texaco Lubrication Engineer will be glad to arrange a showing of this full-color film in your plant. Or, if you wish, send for the informative Texaco booklet called *Greases for Fleet and Contracting Equipment*. For quick action, mail the coupon today.

Texaco Inc.
Dept. CCJ-G-31
135 East 42nd Street
New York 17, N. Y.

Please send me more information about a free showing of "Shear Magic" to my organization.

Please send me a copy of Greases for Fleet and Contracting Equipment.

Name

Company

Address

City

State

LUBRICATION IS A MAJOR FACTOR IN COST CONTROL

January 1960 New Truck Registrations

STATE	Brack- way	Chev- rolet	Dia- mond T	Dodge	Ford	G.M.C.	Interna- tional	Mack	Stude- baker	White	Willys Jeep	Willys Truck	All Others	Total
labama		323	2	37	282	70	78	33		12	5	5	37	884
laska		10	1	1	8	8	7	1	1			2	11	50
rizona		267		60	220	48	83	3	3	13	2	12	68	779
rkansas		437	3	64	585	99	155	4	4	4	6	1	23	1.385
alifornia		2,104	10	241	2.014	407	480	12	7	122	53	75	513	6.038
olorado		294		65	335	70	120	3	5	8	22	35	45	1.007
onnecticut	1	136	3	31	124	27	71	6	2	47	12	25	54	539
Delaware	2	48	. 3	10	43	14	39	29		30	3	3	9	233
District of Columbia		40	1	4	36	11	12	-		2		1	19	120
		497	17	49	733	150	209	29	5	52	39	56	185	2.021
lorida		340	2	37	374	92	150	27	10	50	6	7	82	1.17
leorgia	ALTON COM	27	-	19	58	8	36	4.1	10	2	6	97	40	293
iawall	******		2	17			74	2	1	- 4	8	15	11	407
daho	********	86			152	38		35	7	35	25	70	174	2.81
Illinois		736	35	118	882	147	551		A	51	10			1.87
ndiana	+++×+++×	530	4	97	496	217	254	90	- 4			26 18	93	
owa,		319	2	39	260	52	167		1	4	4		43	910
Cansas	********	370	3	62	389	74	161	1	1	1	10	20	23	1,11
Centucky		339	2	29	343	89	111	16	1	15	13	10	27	99
ouisiana		466	4	26	499	77	120	6	1	4	17	10	63	1,29
Mains	1	77		11	92	26	48	2		4	8	19	9	29
Maryland	4	153	2	32	227	29	103	6	1	11	4	12	43	62
/lassachusetts	7	105	2	42	147	47	69	42	1	17	8	26	29	54
Michigan	4	949	13	260	916	206	242	11	3	41	20	45	128	2,83
Ainnesota		265		29	267	50	117	1	4	10	9	12	25	78
Aississippi		271		23	228	63	85	2	2	15	1	5	10	71
Aisseuri		532	6	54	545	161	284	- 8	3	12	8	13	44	1.67
Montana		91		23	128	21	97	2	1	3	11	26	26	42
ebraska		312	A STREET	36	303	37	158	2	2	14	11	21	21	92
levada	*********	18	-	17	46	17	29	1	3	14	10	16	25	18
lew Hampshire	*******	36	2	8	27		22	3		3	5	13	15	14
lew Jersey	20	389	14	82	551	100	227	65	2	51	17	68	130	1.71
low Movies		246	1	20	224	82	56	1	2	1	6	14	11	66
lew Mexico	98	533	12	119	844	68	432	38	1	115	59	85	257	2.39
low York	30	512	1			137	200		i i	36	13	21	101	1,82
forth Carolina	*******			73	702			26	2	36	1	3	101	35
forth Dakota	TERRETTAN	99	*******	20	121	16	93	********		********	29		107	2.57
Ohio	8	766	12	140	808	174	316	46	3	95		72		
klahoma		417	*******	26	356	78	139	9	6	8	1	4	22	1,06
)regon		227	1	30	142	47	46	5	2	106	8	31	148	79
ennsylvania	9	369	12	123	510	91	307	66	5	85	4	95	97	1,77
thode Island	1	25	********	3	58	13	35	3		2	2	2	18	16
outh Carolina		245		27	261	41	78	8	1	5	8	.7	43	72
outh Dakota	SERRY SERVI	148	2	24	173	35	90	1	1	ANTINCES.	6	16	14	51
ennessee		260	1	26	389	81	91	17	2	2	6	4	24	88
0xas		2,117	9	167	1,796	322	549	40	10	96	20	27	124	5,27
Ran		102		27	70	25	23	2	2		5	4	6	26
ermont	1	41		4	32	13	21	2			4	14	13	14
firginia	INCOME.	324		66	364	61	112	106	3	10	6	30	65	1.14
Vashington		256	1	53	302	103	132	5	3	4	9	24	78	97
Vest Virginia		118	1	31	133	35	58	11	2	13	9	38	28	47
Visconsin		293	5	38	278	78	220	11	3	12	19	32	35	1.02
Vyoming		140		20	97	39	51	2		8	2	10	23	30
	CCC-11-1-1-1	140		20	91	- 00	01	-	-	-	-		-	
otalJanuary, 1960	88	17,805	205	2,660	18,750	4,000	7,408	848	127	1.232	570	1,296	3,246	58.23

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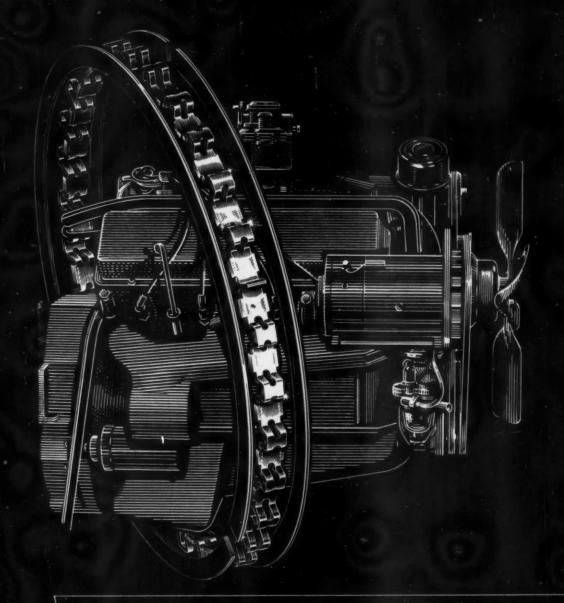
APRIL

- 20—Ohio Motor Bus Assn., Annual Mtg., Lincoln Lodge Hotel, Columbus, Ohio.
- 20-23—California Moving & Storage Assn., Annual Conv., El Mirador Hotel, Palm Springs, Cal.
- 21-23—Heavy-Specialized Carriers Conference, Annual Meeting, Netherland Hilton Hotel, Cincinnati, Ohio.
- 21-23—Specialized Carriers Return Load Corp., Annual Meeting, Netherland-Hilton Hotel, Cincinnati, Ohio.
- 21-23—New Jersey Motor Truck Assn., Annual Convention, Claridge Hotel, Atlantic City, N. J.
- 24-28—American Trucking Assn., Local Cartage National Conference, Annual Convention, Hotel New Yorker, New York City.

- 24-28—American Warehousemen's Assn., Annual Meeting, Americana Hotel, Miami Beach, Fla.
- 24-29—National Assn. of Refrigerated Warehouses, Annual Meeting, Americana Hotel, Miami Beach, File
- 28-29—American Petroleum Industries, Transportation Div., Pipeline Conference, Mayo Hotel, Tulsa, Okla.
- 28-30—Wyoming Trucking Assn., Annual Convention, Gladstone Hotel, Casper, Wyo.
- 28-May 1—Georgia Motor Trucking Assn., Annual Convention, General Oglethorpe Hotel, Savannah, Ga.

MAY

- 1-4—Liquefied Petroleum Gas Assn., Annual Meeting & Trade Show, Conrad Hilton Hotel, Chicago.
- 1-5—American Trucking Assn., Operations Council, Annual Meeting and Trade Show, Shamrock Hotel, Houston, Texas.
- 2-4—Airline Ground Transportation Assn., Annual Meeting, Hotel Ambassador, Los Angeles, Calif.
- 4-5—Illinois Bus Assn., Annual Convention, Wagon Wheel Lodge, Rockton, Ill.
- 6-7—Pennsylvania Motor Truck Assn., Annual Meeting, Penn-Sheraton Hotel, Pittsburgh, Pa.



Sealed Power has Stainless Steel...the very best oil ring metal ever used!

STAINLESS STEEL OIL RING U. S. PAT. NO. 2,789,872



- * Stainless steel resists corrosion makes it virtually impossible for troublesome sludge and carbon deposits to build up. Overcomes oil ring plugging—oil pumping.
- Stainless steel maintains its original, built-in tension indefinitely so it delivers better oil control far longer than ordinary rings.

The high number of spring tension points assures oil control in

tapered and out-of-round bores.

tapered and out-or-round bores.

Side seals in groove—stops oil going around back of ring—no smoking.

End-abutment design produces ring tension independently of contact with bottom of piston groove eliminates groove depth problems.

Chrome-plated, factory-seated side rails give instant oil control. Sealed Power Corporation, Muskegon, Michigan.

Sealed Power

KROMEX
PISTON RING SETS

Fontaine No-slack®

5th Wheels are



The NO-SLACK lock

Fontaine's patented safety feature assures a safe, snug connection between tractor and trailer. All slack, even on worn parts, is automatically taken up by self-adjusting steel wedges without the use of shims or bushings.

The NO-SLACK lock cannot be triggered when coupling unless the king pin is in the proper position for secure locking. The trailer cannot be locked out or partially locked. These two qualities, plus rugged steel plate construction, are responsible for Fontaine's leadership in fifth wheel safety and fifth wheel sales.

in sales in safety

A PERFECT SAFETY RECORD FOR 11 CONSECUTIVE YEARS!

That's what has put Fontaine Wheels ahead...they're first in sales because they're first in safety. For eleven consecutive years there has never been a report of a trailer coming uncoupled from a Fontaine NO-SLACK Fifth Wheel.

THIS RECORD TELLS ITS OWN STORY!

When tractors are equipped with Fontaine NO-SLACK Fifth Wheels, they have the safest and most accepted fifth wheels in the trucking world!

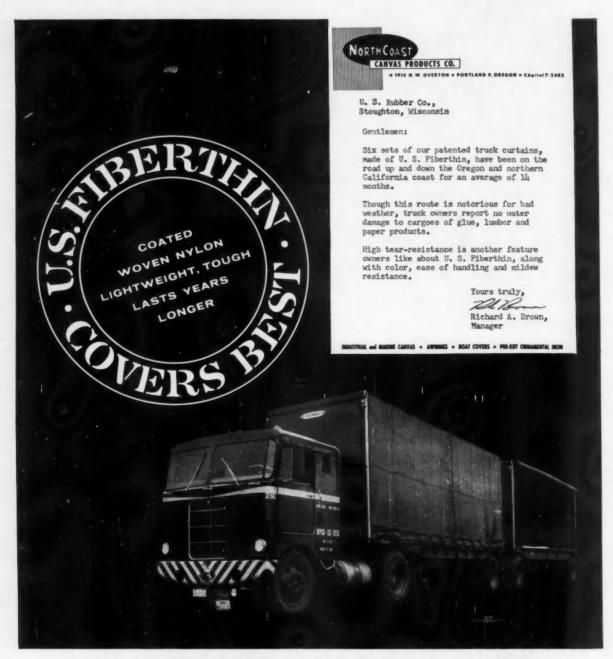
There's a Fontaine NO-SLACK Fifth Wheel for every hauling purpose on every type of truck.

Write today for a complete catalog!

Fontaine Truck Equipment Co., Inc.

1232 North 37th Place • Birmingham 1, Ala.





BETTER PROTECTION, BIGGER PAYLOADS WITH TRANSPORTATION-GRADE U.S. FIBERTHIN®

Plenty of smart truck operators are now protecting cargoes better than ever before — with tarps of tough U. S. Fiberthin, specially developed for the transportation industry. Because transportation-grade U. S. Fiberthin is so light and will not absorb water, they're reducing truck weights, increasing payloads. And U. S. Fiberthin is so easy to handle, they're saving on loading-and-unloading time, labor, expense.

Made of ribbonlike threads of nylon, coated with special rugged neoprene compounds, transportation-grade U.S. Fiberthin lasts a great deal longer than ordinary covering materials. Won't absorb water. Won't mildew even when stored wet. Resists flames, oils, acids, alkalies. See your local fabricator for the best in tarps, curtains and loading-dock canopies made of transportation-grade U.S. Fiberthin.



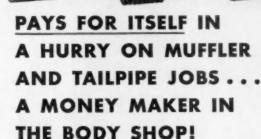
United States Rubber

STOUGHTON, WISCONSIN

NEW air slugger









METAL CUTTER

REMOVES QUARTER PANELS, TURRET TOPS, rocker panels, lower body panels, door inner panels, etc. Cuts smooth and fast on any radius with excellent maneuverability.

CHISEL—breaks spot welds, splits nuts, shears bolts, pulls pins, removes floor boards.



RIVET BUSTER—shears rivets in grill, frame, bumper, brackets, wherever

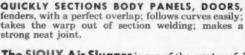
PUNCH—punches out wedged rivets, drives king pins, perch bolts, shock link studs, bearing races, and pressed bearings.



SCRAPER—removes underseal and deadener, without heat. Removes all soft deadener without gumming. Cleans the surface ready for work. Will not damage the metal.



CHISEL gets at those "hard to reach" places; replace individual grill bars, remove rocker panels to be repaired and replaced; removes Ford front door posts without removing dash.



SHEET METAL PUNCH-punches perfect holes for

metal screws, faster than you can put them in place;

Breaks spot welds quickly, easily and inexpensively.

SPOT WELD BREAKER

CRIMPER

aligns garnish rails; punches out small rivets.

The SIOUX Air Slugger is one of the most useful of air tools. It will not create the hazard of fire or explosion and will save cost of torches and gas. Design features include a one piece barrel with no parts to get misaligned or wear out; and a cast iron handle that will survive the roughest treatment. It's light, sturdy, and SIOUX dependable.





Look for SIOUX Tools in the yellow pages under "TOOLS ELECTRIC"

ALBERTSON & CO., INC.

SIOUX CITY, IOWA, U.S.A.

AIR IMPACT WRENCHES * AIR SCREWDRIVERS * ELECTRIC IMPACT WRENCHES * DRILLS * SCREWDRIVERS * GRINDERS * SANDERS * POLISHERS * FLEXIBLE SHAFTS * PORTABLE SAWS * VALVE GRINDING MACHINES * ABRASIVE DISCS.



MT-630 Battery Charger. Yours on easy payments.

SNAP-ON asked shop owners and mechanics all over the country what features they wanted most in a top-quality battery charger. Then SNAP-ON built these features into the new MT-630 battery charger. Here they are:

Simple to Operate Even your greenest mechanic can operate it with ease. General instructions are printed on control panel. Complete instructions in easy-to-read

Double Duty Use it for a quick charge or a slow, overnight trickle charge. Handles 6- or 12-volt batteries.

Automatic Thermo Breaker Protects charger from overheating.

Rugged and Waterproof Completely encased for outdoor use. Cover protects controls from weather and from damage if heavy object falls on charger. Fan sucks in air from side instead of top - no excessive moisture intake.

Automatic Timer with 4 Charging Rates Set it and forget it - high, medium, and low for fast charge; trickle for slow charge.

Color-Coded Ammeter Green and red zones show normal and excessive charging.

Replaceable Inserts for Clamps Solid copper (not just plated) inserts can be removed and replaced - saves cost of replacing entire clamp.

Guarantee SNAP-ON selenium-type charger is guaranteed a full year against defective materials and workmanship. With proper use, it should last for years.

Save time and money with this top-quality SNAP-ON charger. If you've only got one Charger—add an extra one. Customers tell us it pays for itself over and over. Get all the facts from your SNAP-ON man.

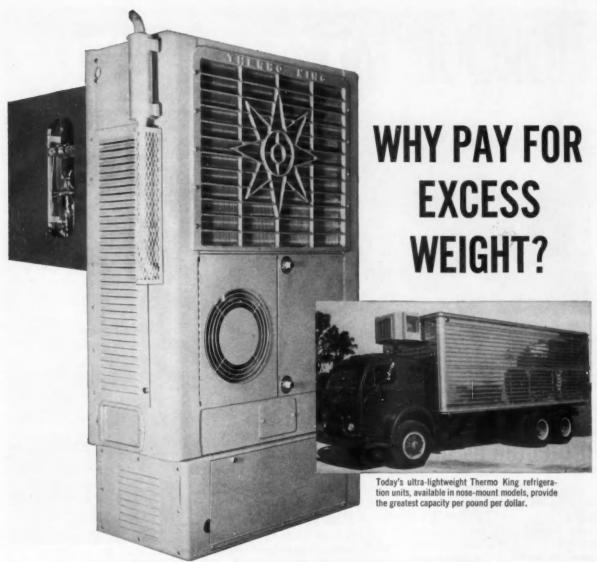




MT-340A Battery Tester. For 6- and 12-volt systems. Automatic relay system protects battery from overload during testing.



KRA-440 Cart. Heavy-duty unit that holds both a battery and the charger. Saves time, saves muscle.



Thermo King refrigeration units are 40 per cent lighter...thanks to Alcoa Aluminum!

Truck and fleet operators are vigilant weight watchers—and rightfully so. Every pound of dead weight eliminated from a truck or trailer is worth at least \$1 a year in extra revenue.

You can see why truck accessory manufacturers strive to trim useless fat wherever they can. Thermo King, the pioneer in transport refrigeration, was faced with a similar weight-reducing problem. Their first truck refrigeration unit weighed a hefty 2,000 lb. Today, a Thermo King unit with the same capacity weighs less than half as much.

"Aluminum helped us lop off the pounds," says M. B. "Mike" Green,

Thermo King executive vice president. "We designed and built a high-speed aluminum compressor that's a marvel for lightness and efficiency. Specially designed aluminum fins in the condenser and evaporator save additional weight and valuable space. To overcome the stresses of road operation, we made the frames of tough aluminum—and kissed more poundage good-by. Had we used steel instead, our units would weigh in about 40 per cent heavier!"

By cutting dead weight, aluminum delivers extra payload, increases tire and gas mileage. Learn how you, too, can get this extra earning and carrying capacity. Write for information on lightweight aluminum refrigeration units, chassis, bodies, cabs or engines to: Aluminum Company of America, 1770-D, Alcoa Building, Pittsburgh 19, Pa. World-wide sales through Alcoa International, Inc.

For exciting drama watch "Alcoa Presents" every Tuesday, ABC-TV, and "Alcoa Theatre" alternate Mondays, NBC-TV

Your Guide to the Best in Aluminum Value







WORLD'S WINNINGEST HORSE protected by Clark Air Ride

This horse rides in regal style—and why shouldn't he? He's Round Table and he's won over \$1,500,000 so far in his racing career-more than any horse in history. His "chariot" rides smoothly on Clark Air Suspension.

This Suspension was chosen by the trailer manufacturer, Aluminum Body Corporation, Montebello, California, principally to swallow the shocks of high-speed travel. Clark Air Suspension also controls sway on

curves . . . automatically keeps trailer level when loads are unbalanced . . . prevents "wheel-hop" when stopping.

If you haul fragile cargo of any kind-horses or precision instruments, cameras or cookies-it will pay you to investigate Clark Air Suspension. Besides load protection, you'll get the pluses of lighter vehicle weight . . . less maintenance . . . and longer tire life. Drop us a postcard for full details.

TESTS FOR U.S. NAVY SHOW CLARK AIR RIDE **CUTS ROAD SHOCK 70%**

When the U.S. Navy put together this traveling air training "school," some method of protecting a trailer full of delicate machines and instruments had to be found.

The Navy selected a trailer built by The Gerstenslager Company with Clark Air Suspension.

This choice was made after painstaking road tests had shown that a trailer equipped with ordinary leaf



springs transmits up to 51/2 "g's" of shock to the cargo. Coil springs cut this "bounce" to 21/2 "g's". Clark Air Ride reduces it to 11/2 "g's", well within the margin of safety desired by the Navy engineers and less than any other air suspension tested.

CLARK AIR SUSPENSIONS

come as complete packages, ready for installation on new or in-use semis, in single or tandem units. Each "package" includes the frame structure, air springs, shock absorbers, torque rods, radius rods, air protection filters, and leveling valves.



For Further Information

and full details on any of Clark's automotive components, simply address a card or a call to:

CLARK EQUIPMENT COMPANY

AUTOMOTIVE DIVISION

Buchanan 3, Michigan



ALSO FLASHES ALL FOUR TURN SIGNALS SIMULTANEOUSLY AS EMERGENCY WARNING SIGNALS

EXCLUSIVE DIETZ FEATURES:

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- Priced to please the pocketbook.



Rotate full right or left and Dietz No. 114 flashes all four turn signals for eye-catching, compelling warning light.

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Company

Street Address

Laugh it off

The Freight Handler for Fleety-Fleet Express was overpaid \$25 on his paycheck. He said not a word about it. A week later the accounting department deducted the overpayment.

Freight Handler: "What's the big idea? My paycheck is short \$25!"

Warehouse Foreman: "You were overpaid \$25 last week. And you didn't say a word about it, incidentally."

Freight Handler: "O.K. I know that! I can overlook one mistake, but when it happens twice, then it's time to say something!"

cc.

Car salesman: "And what can I do for you, Sir?"

Texas Oilman: "My lady friend is laid up with a bad cold. Have you anything suitable as a get well car?"

cel

Reefer driver's son (as Dad scowled over the report card): "Gee, Dad, no wonder my teacher thinks I'm stupid . . . she's a college graduate!"

CCJ

Terminal Manager: "This is the end. You're fired!"

City Driver: "Fired!? I allus thought slaves were sold."

COJ

TWO LADIES WERE DISCUSSING WHAT THEY WOULD WEAR TO THE COUNTRY CLUB DANCE:

"We're supposed to wear something to match our husband's hair," said Mrs. Jones. "So, I'll have to wear black. What will you wear?"

"GOODNESS!", GASPED MRS. SMITH. "I DON'T THINK I'LL GO!"

Freight Claim Steno (to the window cleaner): "Do you see many strange sights?"

Window cleaner: "And how! Just saw an office on the fourth floor where everybody's working!"

CCJ

"Would we go up, or down, if the elevator cables broke?", asked a stout lady passenger.

Sick and tired of such stupid questions, the elevator operator answered, "Lady, that depends on the kind of life you've led.!"

cc.

NEIGHBOR: "WHAT'S THE MATTER?"
MRS. NEWLYWED: "WELL, JOHN
SAID HE WAS GOING OUT TO SHOOT
CRAPS TONIGHT, AND I DON'T KNOW THE
FIRST THING ABOUT COOKING THEM."

"Cici Jay"



"Luckily I was standing nearby when he walked right off the shipping dock!"

"Didja hear about our shop foreman? He was so flabbergasted when his wife had quadruplets that he ran out and bought a fifth!"

cci

REEFER DRIVER: "THERE'S A FLY IN

DINER WAITRESS: "COULD BE, MAC, COULD BE. YOU SEE THE COOK USED TO BE A TAILOR."

cc.

Judge: "Madam, you are charged with creeping into your husband's room and shooting him with a bow and arrow. Will you now tell the jury your reason for such an act?"

"Of course, your honor. I didn't want to wake the children!"

cci

Shop Roustabout: "I'm through! I'm gettin' a divorce! My wife called me an idiot!"

Yard Hostler: "Aw, now, cut it out! That's no ground for divorce."

Shop Roustabout: "Oh, yes it is. It's plenty grounds for divorce!"

Yard Hostler: "Then there must have been more to it."

Shop Roustabout: "There was! I came home and found my wife in the arms of the man next door, so I said, 'What's the meaning of this?"

Yard Hostler: "Well, now, that's a horse of a different color! What did she say?"

Shop Roustabout: "She said, 'Can't you see, you idiot?" "

CCJ

Coed: "I'll stand on my head or bust!"

Gym Teacher: "Just stand on your head."

Resume Work

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REVOLUTIO VHEEL DESIGN



GUARANTEED WEIGHT AND BALANCE - The new "Hutch-Carr" multiple disc demountable rim wheel will have a guaranteed weight as delivered from the factory to within a variance of one pound per unit. The wheel will also carry a guarantee to be within eight ounces of wheel balance. For the first time on the market you may get a multiple disc pressed steel wheel with a guaranteed wheel weight per unit and true wheel balance.

SAVES 30 POUNDS PER UNIT - The new "Hutch-Carr" multiple disc demountable rim wheel will save approximately 30 pounds per wheel unit over cast steel wheels on the market today.

COOL RUNNING WHEELS - With the new, advanced spoke-type design "Hutch-Carr" rolled plate steel wheel, it is possible to allow more flow of air through the wheel between the brake drum and the inner rim, making both the brake shoes and tires run cooler.

COMPETITIVELY PRICED - The new "Hutch-Carr" is the first pressed steel wheel made from rolled steel plate to be bought on the market in the advanced new design at a competitive price with cast steel wheels.

True wheel balance can double tire life and protect undercarriage and suspension units from excessive wear plus giving a smooth cargo ride. The average trailer unit on the road today rides on \$2,000.00 worth of rubber - this investment is worth protecting with "Hutch-Carr" multiple disc "guaranteed balance" wheels.

The new "Hutch-Carr" multiple disc pressed steel wheel has been in development for the past five years. Hutchens engineers have found that by using a controlled manufacture process of production in stamping the rolled plate steel, it is possible to assure the new "Hutch-Carr" being completely free of any possible porosity of sand and other materials that could create imperfections.

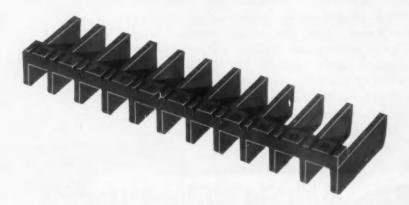
For further information and complete specifications on the "Hutch-Carr," write immediately to the factory address listed below.

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takes more bumps than a burlesque queen



Even the most famous of footlight dollies would marvel at the new line of Willard Tractor-Commercial Batteries. That's because these batteries are built for bumps—engineered to take them day after day, month after month in the most severe service.

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Now, in Willard batteries, you also get the benefit of

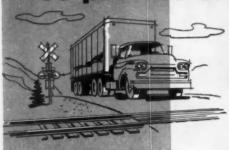
revolutionary Formula 57, recently perfected in our laboratories. This formula is the basis of a modern manufacturing process which produces plates that stay chemically active under the most extreme undercharge conditions. Formula 57 combats sulfation which is so deadly to battery efficiency. Result—still longer life in Willard batteries.

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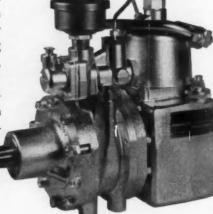


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deliver ample air for safe operation of brakes

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"DRIVE-THRU" Rotary Air Compressor is designed for use on diesel engine trucks. It features all the advantages of rotary compression.

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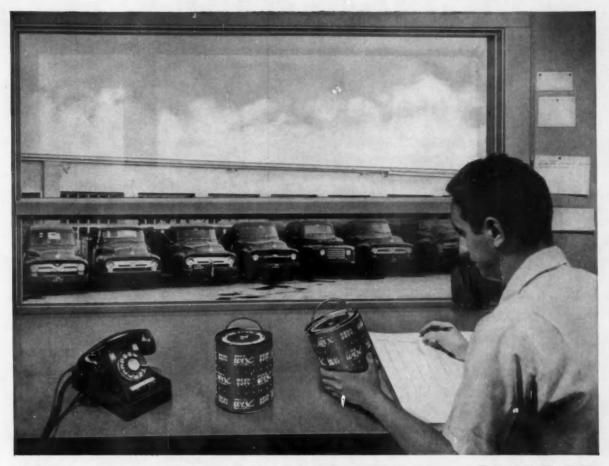
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Chek-Chart Has New Lube Guide

The 1960 Automotive Lubrication Service Guide has over 160 pages of information including a service instruction section; lube diagrams on light trucks and 1960 and older cars; capacities of crankcases, transmissions, differentials, cooling systems and gas tanks; diagrams of contact positions for lift adapters when frame engaging lifts are used; identification information on limited-slip differentials; and tire pressure tables.

Obtain your guide from the Chek-Chart Corp., 33 E. Congress Pkwy., Chicago 5, Ill. Price is \$19.50 per single copy; 2-24 copies at \$15.25 each. Price includes a year's subscription to the Chek-Chart monthly Service Bulletin.

Alcoa Reports on Truck Bodies

The first all-aluminum unit (called "rock body" by the trucking industry) was placed in service 27 years ago. That's what is stated in "A Technical Report on Off-Highway Rock Bodies," a recent study compiled by the Aluminum Co. of America. This report shows the progress made in the use of aluminum in the trucking industry.

A free copy of this report may be obtained by writing Aluminum Co. of America, Room 799, Alcoa Bldg., Pittsburgh 19, Pa.

Improve Your Loading System

A kit is available containing facts, figures and equipment data for anyone planning a new or improved truck loading dock. Featured in the kit is an 8-pg booklet entitled "Loading Docks and Yards." It's compiled from information published by ATA, Truck Trailer Mfg. Assn., SAE and others.

A free copy may be obtained from the Kelley Co., Inc., Milwaukee 9, Wis.

Guide Covers Air Brakes

A new 40-pg guide gives details on inspecting, testing, servicing and adjusting automotive air brake equipment. It contains the latest service information on air brake system of trucks, buses and trailers. The "Master Brake Service Guide—Air Brakes" is illustrated and indexed.

Obtain a free copy from your World Bestos Distributor or write World Bestos, New Castle, Ind.

Conversion Table is on Wall Chart

A new wall chart is a handy reference for shop men. It lists common conversions such as inches to centimeters and watts to hp, and many others that are hard to find in reference manuals.

For your free wall chart of Conversion Factors write Precision Equipment Co., 4411 E. Ravenswood Ave., Chicago 40, Ill.

Get the Most from Diesels

"Ten Maintenance Steps" is the name of a new 24-pg booklet from Cummins. It tells how to increase equipment availability, reduce operating costs and get better performance. Topics covered include lubrication, fuel regulation, corrosion, and maintenance schedules.

Obtain a free copy from the Sales Services Dept., Cummins Engine Co., Inc., Columbus, Ind.

Size and Weight Limits Are Given

A new 70-pg booklet gives complete information on truck and trailer size and weight restrictions throughout the U. S. and Canada.

Write for free copy to Arthur Laack, Merchandising Mgr., FWD Corp., Clintonville, Wis.

Do you have a mechanic training program? Be sure to see this year's new completely revised listing of maintenance manuals and training films in Section 5, this issue.



Geared with Fuller ROADRANGER ... The Willett Company is using 61 Fuller-equipped GMC and International Tractors, operating from 5 terminals, for bulk hauling in the Chicago area.

Willett conquers city traffic and toll roads

"Our R-46 ROADRANGER Transmissions have achieved an excellent record," says Walter Neumann, Director of Purchases for The Willett Company, Chicago. "They help our drivers maintain fast trip times whether they're creeping in city traffic or running at top legal speed on the

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"Our drivers really appreciate the 8 forward speeds with short, progressive steps between ratios, shifted with a single lever."

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"Pacing Progress" in the transportation field is mandatory for Eberhard.

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HOW TO GET MORE THAN TWICE THE LIFE FROM YOUR TIRES

RISING COSTS in nearly every phase of fleet operation make it increasingly difficult to show a profit. Anything that will reduce down time, or cut operating costs-per-mile demands your serious consideration.

You owe it to yourself, therefore, to get all the facts on a *different*, *decidedly better cord* that adds thousands of miles to the life of truck tires. It's called Bekaert Steel Wire Cord.

Actual records from millions of miles of use under most severe conditions prove this high tensile carbon steel wire cord gives truck tires more than twice the life of tires made with textile cord. In many cases, tires have gone as much as 300,000 miles on original treads!

Moreover, since the steel cord retains excellent flexibility under vulcanization, tires with this new, better construction feature may be retreaded again and again.

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The toughness of steel, which makes possible such remarkable wearing quality, at the same time provides maximum protection against road delays caused by heat failures, impact breaks and punctures. Using truck tires made with Bekaert Steel Wire Cord, you can gain significant reductions, both in operating cost-per-mile and in profit-wrecking down time.

NEW FREE BOOK TELLS HOW

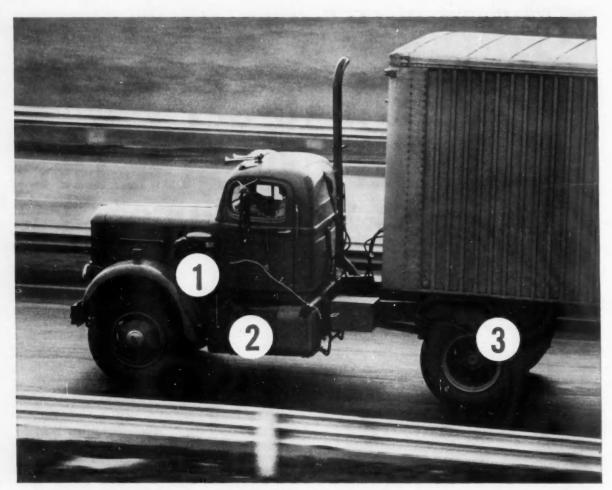
Bekaert has prepared an interesting, informative booklet, "Extra Miles," with all the facts about Steel Wire Cord and the dramatic role it plays in the evolution from cotton to rayon, nylon and steel wire in the continuing search for better cord.

This new, free booklet is yours for the asking. It explains why tires made with Bekaert Steel Wire Cord are virtually indestructible, yet sacrifice none of the resiliency of textile cord. It describes constructions which enable leading truck tire manufacturers to offer unparalleled protection against blowouts, cutting and curb damage. It shows how Bekaert Steel Wire Cord lets tires run up to 125 degrees cooler... tells how you get better traction, higher load carrying capacity and less power loss with tires made with Bekaert Steel Wire Cord.

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- 3 ESSO MULTI-PURPOSE GREASE H serves every fitting in the fleet. Matches or beats performance of most single-purpose wheel bearing, water pump and chassis greases. Provides "stay put" lubrication under hard driving conditions. Helps seal out dust and moisture.

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- * FOR COOL OPERATION
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- * FOR MINIMUM WEIGHT IINCREASE
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TOP RING SECTION



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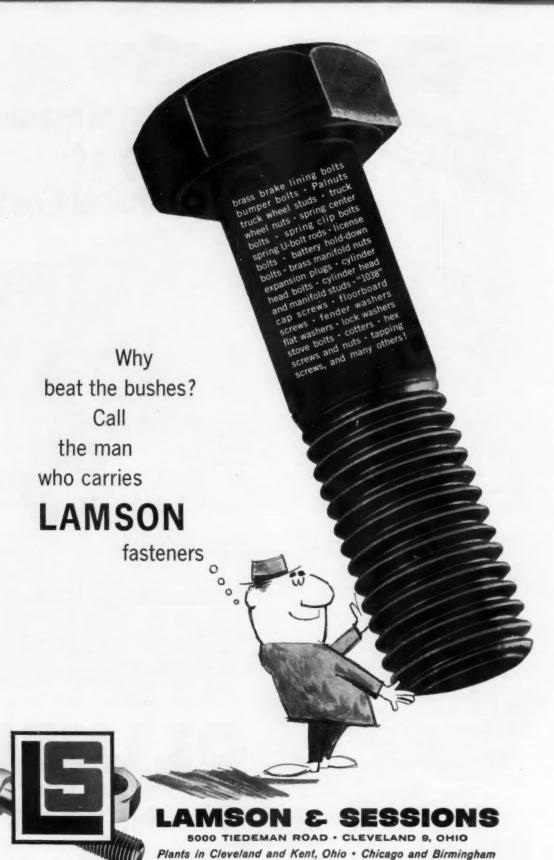


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- 1. Cast-anchored—no bimetal expansion problem.
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orderly, on-the-job system that spells dependability. Bendix-Westinghouse Air Brakes mean on-the-job braking dependability for the country's transport industry. The reason for this is that all components are designed and engineered to work together as a system. Result is the greater long-range safety, economy, and dependability that have made Bendix-Westinghouse Air Brake Systems first choice of the nation's fleet operators and vehicle manufacturers. For the surest stops available, make it Air Brakes by Bendix-Westinghouse.

SPECIFY COMPLETE AIR BRAKE SYSTEMS BY

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450 BENDIX-WESTINGHOUSE DISTRIBUTORS HELP KEEP 'EM ROLLING

-from the Golden Gate to the Empire State



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Through the Bendix-Westinghouse Repair Exchange Service, for example, your distributor offers you the finest factory rebuilding program in the industry. Under it, you can exchange equipment worn or damaged from long service for factory-rebuilt devices warranted the same as brand-new units and including the latest engineering improvements. Result: you get new-unit operating efficiency at low cost per mile.

Every distributor also carries a complete stock of genuine Bendix-Westinghouse parts—from the smallest fittings and gaskets to brand-new major components. Result: you get the service parts you need when you need them.

Finally, if your trucks, trailers or school buses are not now air-brake equipped, your distributor offers you a convenient way to convert to air with field installation kits. Result: you get all the benefits of air on your present non-equipped vehicles.

So rely on your Bendix-Westinghouse Authorized Distributor for the finest in service. Look for his sign in major transportation centers from coast to coast.

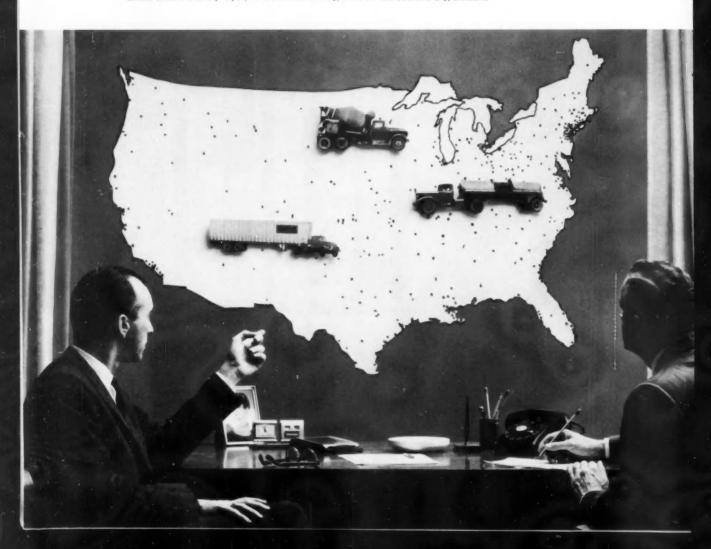


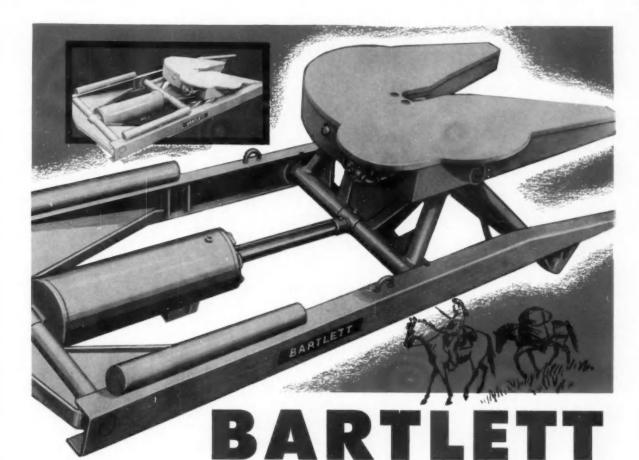
Bendin-Westinghouse



AUTOMOTIVE AIR BRAKE COMPANY

General offices and factory—Elyria, Ohio. Branches—Berkeley, California and Oklahoma City, Oklahoma





PIONEER and LEADER

SAVE ACCIDENTS and Physical Injuries — ELIMI-NATE BACK BREAKING CRANKING



COMPLETELY
CAB CONTROLLED

"PIGGY BACK"

HYDRAULIC 5TH WHEEL

IF YOU OPERATE 25 or MORE TRAILERS...
THIS SPOTTING 5TH WHEEL IS A MUST!
WILL PAY FOR ITSELF IN A VERY SHORT TIME.

LOCKS AUTOMATICALLY - UNLOCKS BY AIR.

INCLUDES FRAME RAILS ... HEAVY DUTY FIFTH WHEEL ...
POWER-TAKE-OFF AND CONTROLS. NOT A MAKE SHIFT
ASSEMBLY.

STURDIEST ASSEMBLY BUILT . . . REINFORCED TO TAKE PUN-ISHMENT.

SHIPPED COMPLETE - READY TO INSTALL ON TRUCK FRAME.

USERS include Truckers and Private Carriers from Coast to Coast, Canada, Hawaii, Puerto Rico, Venezuela, Sweden and England. Check with a user in your area on the Bartlett Quality and the Savings Possible.

BARTLETT TRAILER CORPORATION

3080 ARCHER AVENUE

CHICAGO 8 . ILLINOIS

Virginia 7-1160

MORE FLEETS USE BARTLETT 5TH WHEELS THAN ANY OTHER

BARTLETT



PIONEER and LEADER

"PIGGY BACK"
HYDRAULIC 5TH WHEEL

STURDILY BUILT HEAVILY REINFORCED THROUGHOUT

STRONGEST LIFT 5th WHEEL MADE!

LASTS LONGER - TAKES ABUSIVE TREATMENT.

CONSTRUCTED FOR CONTINUOUS HARD HITTING SERVICE.

CAN BE FOUND WHEREVER TRAILERS ARE SPOTTED.

AT TRUCKING DOCKS...FOR RAILROAD "PIGGY BACK" AND STEAMSHIP "FISHY BACK" OPERATIONS.

YOU WILL LIKE ITS
DEPENDABLE PERFORMANCE

Adapt your Bartlett Hydro Lift Wheel To Make a Tow Truck.

Slip-in Boom — easily inserted and removed.

Will lift any object that does not out-balance tractor front wheels.

LIFTS - 24" OFF GROUND



BARTLETT TRAILER CORPORATION

3080 ARCHER AVENUE - CHICAGO 8 - ILLINOIS

CHECK YOUR TUNE-UP

MAINTENANCE

TRUCKS	BUSES
Autocar 96	Crown 204
Brockway 100	Flxible 208
Chevrolet 104	Flxible-Twin 208
Diamond T 108	General Motors 212
Divco 112	Southern 214
Dodge 116	
Freightliner 120	
Ford 122	
FWD 130	
GMC 134	
International 138	ENGINES
Kenworth 142	
Oshkosh 146	
Peterbilt 150	Continental 222
Reo 154	Cummins 224
Studebaker 158	Deutz 226
Volkswagen 186	GM Diesel 228
Volvo 188	Hall-Scott 233
Walter 192	Hercules 232
White 196	P & H 236
Willys 200	Roiline 239
Willy's 200	Waukesha 238
FLEET PASSENGER CARS	244

Checker-Superba, Chevrolet, Comet, Corvair, Falcon, Ford, Dart, Dodge, Plymouth, Rambler, Rambler-American, Studebaker-Lark, Valiant

AUTOCAR

ENGINES

Engine	Dis	place-	Bore &			
Model	ment	(cu in.)	Cyl	Stroke	(in.)
White 490A	5	31	6	43/4	x	5
Cummins JT-6	4	01	6	41/8	x	5
Cummins NH-180, NH-195 Cummins HRF, NH-220, N		72	6	47/8	x	6
NTO, NRT, NRTO		43	6	51/8	x	6

Oil Pressure

(At governed speed)	
White 490A	40-60 psi
Cummins JT-6	30-60 psi
All others	30-50 psi

Compression Pressure

White	490A.		110-120	psi	@
cr	anking	spe	ed.		

IGNITION

Cam Angle (Dwell)

White	490A	 31-37	deg

Breaker Point Gap

White	490A	 .022 in.

Spark Occurs

(Degrees	Bef	ore	Top	Center)	
White 49					des

SPARK PLUGS

Make & Type

White 490A	*******	CH D-10
------------	---------	---------

Size

	White	490A			18 mm
--	-------	------	--	--	-------

Gap

White	490A	 .025 in.

Torque

10-1	White	490A	* :		. ,	. ,	. ,					25	lb-f	i
------	-------	------	-----	--	-----	-----	-----	--	--	--	--	----	------	---

VALVES

Operating Tappet Clearance

White 490A Cummins engines (with oil temperature @ 140 deg)	Z	ero
JT-6Inlet:	.015	in.
Exhaust:	.025	in.
HRFInlet:	.014	in.
Exhaust:	.022	in.
All othersInlet:	.014	in.
Exhaust:	.027	in.

Seat Angle

White 490.	Α	Inlet:	45	deg
		Exhaust:	45	deg
Cummins		Inlet:	30	deg
		Exhaust:	30	deg

TORQUE

Cylinder Head Bolt

White 490A Cum JT-6		105-110	lb-ft
11/16	in.:	280-300	lb-ft
3/4	in.:	380-400	lb-ft
All others		430-450	1h-ft

VALVE SPRINGS

Free Length

White 490	Α				2.531	in.
Cummins					2.539	
Cummins	HRF				3.484	in.
All other					3.313	in.

Pressure

White 490A177-18 pressed to 1.612 in.	7 lb	com-
Cum JT-6122 lb comp	ress	ed to
Cum HRF179½-198½ pressed to 2.1875 in.		com-
All others104-114 pressed to 1.8437 in.	lb	com-

BATTERY

Amp-Hour Capacity

Timp III a a a paratil	
All gasoline models	120
Cummins JT-6	120
DCU70T, DCU70TL, DCU7	064T,
DCU7064TL, DC75TL,	
DC7564TL, DC102TL,	
DC10264L, A models.	120
Other diesel models	140
Models with air starter	60

Plates Per Cell

All gasoline models	17
Cummins JT-6	17
DCU70T, DCU70TL, DCU70	64T,
DCU7064TL, DC75TL,	
DC7564TL, DC102TL,	
DC10264L, A models	17
Other diesel models	21
Models with air starter	9

Terminal Grounded

Δ 11	models	Pos

FRONT END

Toe-In

All	models											0-1/4	deg
-----	--------	--	--	--	--	--	--	--	--	--	--	-------	-----

Camber

All models	1 (dog

Caster

Truck Model

eg eg
-
er
-8
eg
leg
leg
leg
leg
֡

King Pin Slant

ALUCK D	Tonei						
FD900,	FE900		×			51/2	deg
FE18, F	U900			*		0	deg
FG900						8	deg

CAPACITIES

Crankcase

Whi											16	qt
Cun	ami	ns .	IJ	[-	6						16	qt
All	oth	ers						*			28	qt

Transmission

Fuller:		
	17	pt
	21	pt
PORO WILLIAM		pt
FT1000		pt
W 4 4 4 0 0		pt
R-63, RA-63, R-630D, RA-6301		
R-660, RA-660		pt
4004000	31	pt
R-95, R-950		pt
1011100	35	pt
R-96, RA-96, R-960,		
RA-960, R-1150	36	pt
Spicer:		
8041, 8045, 8241, 8245	16	pt
6352, 6453	17	pt
8051, 8051A, 8055, 8055A,		-
8251, 8251A, 8255,		
8255A 2	24	pt
8125	10	pt
Auxiliary		
3A65, 3B65	13	pt
		pt
A 11		pt
		*

Rear Axle

295C (GH) 18 pt 189C, 79746 24 pt 294C (FT) 25 pt 124C, 134C, 233C 26 pt 135C 32 pt R101 34 pt	
189C, 79746 24 pt 294C(FT) 25 pt 124C, 134C, 233C 26 pt 135C 32 pt R101 34 pt	
124C, 134C, 233C 26 pt 135C 32 pt R101	
135C	
R101 34 pt	t.
R101 34 pt	t
	t
Q300 35 pt	t
335C, 340C 38 pt	t
R300 40 pt	t
232C, 235C, 240C, 389C. 44 pt	t

Tandems:

(Capacity of each axle) 34DSA, 38DSA, SLHD(a)

oobbin, build (a	,
Front:	24 pt
Rear:	22 pt
Front:	26 pt
Rear:	24 pt
Front:	26 pt
Rear:	32 pt
	Front: Rear: Front: Rear: Front: Rear: Rear:

42M	(c),	SQD,	SQDD(a),	
		7		

SRD, SRDD,		
TD175D	22	pt
SLDD, 36M(b)	24	pt
SQW	26	pt
SFD4600, SFDD4600(a),		
SFD4640, SFDD4640(a)	2	
SFD4742, SFDD4742(a)	,	

Note: (a) add 2 pt in Inter-axle differential after reassembly.
(b) add 3 pt in power divider.
(c) add 6 pt in power divider.

Cooling System

Models with:											
White 490A	*		*	*					ĸ	39	qt
Cummins JT-6		*		*	*	*	*	*	*	31	qt
Cummins NT										44	qt
All others									×	42	qt

LUBRICATION

Crankcase

White 490A...Use SAE 30 in Summer, SAE 20 in Winter. Al! Cummins engines...Above 90 deg use SAE 30; Between 32 and 90 deg use SAE 20; Below 32 deg use SAE 10W.

Transmission

SpicerUse	SAE	50 6	engine	oil
all year.				
FullerUse	SAE	90	strai	ght

mineral oil all year.

Rear Axle

SQW...Use SAE 140 straight mineral oil all year.

124C, 134C, 189C, 233C, 292C(TK), 293C(G), 34DSA, 38DSA, 32M, 36M, 42M...Use SAE 90 extreme pressure lubricant all year.

All others...Use SAE 140 extreme pressure lubricant all year.

MODEL NUMBERS

Identification plate on left cab door shows number for truck model, serial number, rear axle, front axle and transmission model.

Engine...See plate on side of block.



DEPENDABLE KILGORE FLARES

In all kinds of weather, your vehicles are safe. Kilgore Flares placed ahead, beside and behind a stalled truck provide brightly visible warnings. Kilgore Automotive and Truck Flares ignite instantly. Candle power substantially exceeds minimum requirements. Made with plastic plug base for greater rigidity. Available with spikes, without spikes, with wire stands, and with wood handles.

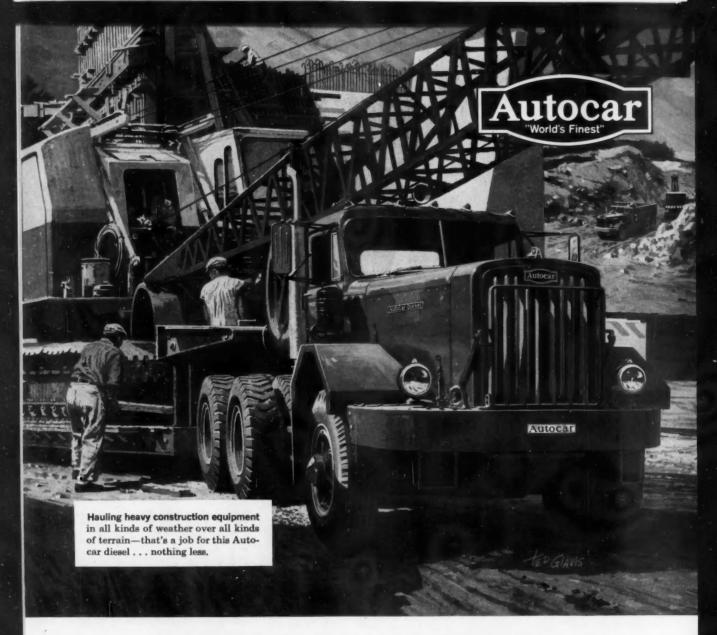
Quicker Starting Better Performing Longer Even Burning

SAFETY RED FLARES FOR HIGHWAY NIGHT-TIME EMERGENCIES

Kilgore, INC.

INTERNATIONAL FLARE SIGNAL DIVISION

WESTERVILLE 2, OHIO



"For this we need Autocar ... nothing less can handle it"

Listen to an experienced contractor. When he says, "This is a job for Autocar," he *knows* what he's talking about.

He's thinking of the tight schedule he's got to meet . . . the extrasize loads where he must have tremendous power built into a tractor that won't pull apart. He's remind-

ing himself that every Autocar he's ever worked with was custom-engineered to its job—and that every component in it was precision-built to stay on the job. His faith in Autocar grows out of his own personal experience with Autocar at work.

The jobs Autocars perform in construction — hauling big bulldozers, shovels, dumploads over rough terrain—these expose the fact that since nobody builds like Autocar, nothing matches Autocar. That's how this tractor got to be known everywhere as the "World's Finest."

White-Autocar comprehensive service throughout the U.S.A. Don't settle for less than Autocar!



Division of The White Motor Company Exton, Pa.

FITZGERALD GASKETS have the

First with the best replacement gasket

Fitzgerald Fused-Aluminum Steel and Asbestos Gasket with "built-in" SEALABILITY.



The Fitzgerald Manufacturing Co.

Torrington, Connecticut

Branches and Warehouses: Los Angeles, Calif.—Chicago, III.
Canadian FITZGERALD Ltd., Toronto, Canada

answer

√ Check Your Tune-Up

BROCKWAY

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl		ore & ke (in.)
			Dere	
40B (Con M6330)	330	6	4	x 43/8
41BD (Con M6363)	363	6	4	x 4 13/16
42BD (Con B6427)	427	6	4 5/16	x 47/8
46BD (Con R6513)	513	6	41/2	x 53/8
48BD (Con R6572)	572	6	43/4	x 53/8
46FD (Con R6513)	513	6	$4\frac{1}{2}$	x 53/8
48FD (Con R6572)	572	6	43/4	x 53/8
49BD (Con R6602)	602	6	47/8	x 53/8
Diesels				
Cum NH-180	672	6	47/8	x 6
Cum NH-195	672	6	47/8	x 6
Cum NH-220	743	6	51/8	x 6

Oil Pressure

All gasoline engines... 55-65 psi @ 2000 rpm All diesel engines... 30-50 psi @ 2100 rpm

Compression Pressure

(At cranking speed) 40B, 41BD 115-120 psi 42BD 120-125 psi 46BD, 46FD, 49BD 115-125 psi 48BD, 48FD 108-112 psi

IGNITION

Breaker Point Gap

All gasoline engines..

Cam Angle (Dwell)

40B, 41BD, 46BD... 39 deg 42BD, 48BD 29 deg 48FD, 49BD 31-37 deg

Spark Occurs

(Degrees Before Top Center) 40B 9 deg 41BD 4 deg 42BD 2 deg 46BD, 48BD, 48FD, 49BD 5 deg

SPARK PLUGS

Make & Type

40B CH D-16 Others

Size

All engines 18 mm

Gap

.022 in.

All engines025 in.

BATTERY

Amp-Hour Capacity

46BD & FD 150 48BD & FD (2 batteries) 120 Other engines 120

Plates Per Cell

46BD & FD 19 48BD & FD (2 batteries) . . 17 Other engines

Terminal Grounded

All models Pos

VALVES

Operating Tappet Clearance

Gasoline engines only Exhaust: .022 in. 41BD, 42BDInlet: .016 in. Exhaust: .024 in. Other engines Inlet: .020 in.

Exhaust: .030 in.

Seat Angle

Gasoline engines only 40B, 41BDInlet: 30 deg Exhaust: 44 deg 42BDInlet: 15 deg Exhaust: 44 deg Other engines Inlet: 30 deg Exhaust: 44 deg

VALVE SPRINGS

Pressure—Valve Open

Gasoline engines only 40B, 41BD... 115-123 lb @ 1.520 in. 42BD... 129.7-143.7 lb @ 1.226 in. Other engines ... Inner: 86-94 lb @ 1.367 in. Outer: 153-167 lb @ 1.617 in.

FRONT END

Toe-In

All models 1/16-1/8 in.

Camber (Positive)

All models

Caster (Positive)

128WX, 147WL, 147W, 155W, 148WD, 148SLD, 258T, H258T, F258T, N258T 1 deg All other truck models . .

King Pin Slant

128WX, 147WL, 147W, 155W 51/2 deg F260T, N260T, 260L, H260L, F260L, N260L, N260LQ, 260 LF, N260LF 8 deg All other truck models 0 deg

CAPACITIES

Crankcase

Engine		
40B, 41BD	7	qt
42 BD	8	qt
46BD, 48BD, 49BD	14	qt
46 FD, 48 FD	14	qt
All diesels	28	qt

Transmission

Truck Model		
128WX, 147W, 147WL	51/2	qt
148WD, 148SLD, 155W,		
157L, 157LL, 157LQ	8	qt
F260T, N260T, N260LQ,		
N260LF	$12\frac{1}{2}$	qt
Other models	12	qt

Rear Axle

Truck Model		
128 WX	9	qt
147W, 147WL, 148WD	12	qt
155W, 257T, H257T,		
F257T, N257T, 258T,		
H258T, F258T,		
N258T	10	qt
157L, 260T	16	qt
F260T, N260T, 260L,		
H260L, F260L, N260L	19	qt
148SLD, 157LL, 260LF,		
N260LF (each axle)	14	qt
157LQ, 260LQ, H260LQ,		
F260LQ, N260LQ		
(each axle)	11	qt

Cooling System

Cooling System	
Truck Model	
128WX	23 qt
147W, 147WL	24 qt
148WD, 148SLD, 155W.	29 qt
157L, 157LL, 157LQ	33 qt
257T, 258T, 260T, 260L,	
260LQ, 260LF	44 qt
157LL, H257T, F257T,	
H258T, F258T,	
H260L, F260L,	
H260LQ, F260T,	
F260LQ, F260LF	41 qt
N258T, N260T, N260L,	
N260LQ, N260LF	42 qt
	-

LUBRICATION

Crankcase

All gasoline engines...Use "DG" or "MS" lubricant. Above 90 deg use SAE 40; From 32 to 90 deg use SAE 30; Below 32 deg use SAE 10W-30, SAE 20 or SAE 10W.

All diesel engines... Vary lubricant type with sulphur content of

fuel. For fuel with less than 0.5 per cent sulphur use oil which meets military specification MIL-L-2104A; for 0.1 to 1.0 per cent sulphur use S2 oil; with more than 1 per cent sulphur use S3 oil. Above 90 deg use SAE 30; From 32 to 90 deg use SAE 20; Below 32 deg use SAE 10W.

Transmission

Spicer auxiliaries....Use mineral SAE 50 engine oil all year.

All others...Summer: Use SAE 140 mineral gear oil. Winter: Use SAE 90 mineral gear oil.

Rear Axle

All Eaton axles... Use SAE 90
Multipurpose gear lube with
military specification L-2105
and a score load of 51 or
higher all year.

All Timken axles... Use SAE 140 Multipurpose gear lube with Timken material specification 0-65 all year.



Get UNI-MATCHED Design... Get BROCKWAY



BROCKWAY UNI-MATCHED DESIGN

means that your truck is perfectly integrated for your exact needs



Brockway's UNI-MATCHED method of construction offers you completely coordinated vehicles built for today's operating requirements. Engine, clutch, transmission, axles — matched and balanced for the best power combinations; the famous Brockway chassis — built to individual specifications; the roomy and comfortable Safety-View cab — built for long service . . . all are integrated with the hundreds of other functional parts into an efficient smoothly operating unit. Expert building and rigid quality control set a standard of performance that mass producers of heavy duty trucks would find difficult to equal.

BROCKWAY MOTOR TRUCKS CORTLAND, N. Y.

Division of Mack Trucks, Inc.



Because:

Only (NENDRICKSON) offers a choice of three proven springing media in one basic design.

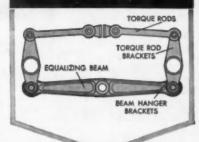
Only (HENDRICKSON) offers the combination of four-point frame mounting and perfect axle alignment.

Only (REDDICKSON) offers inherent stability and the exclusive equalizing beam feature which reduces the effect of road irregularities 50%.

Only (NENDRICKSON) design offers reduced tire wear and elimination of maintenance.

All Hendrickson Tandem Suspensions are interchangeable between trucks, tractors and trailers—and are also interchangeable between makes of axles. Parts inventories can be reduced! Fleet operators can specify the design best suited for each particular operation.

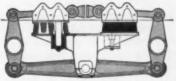
STEEL, RUBBER or AIR SPRINGS in ONE BASIC DESIGN!



RT SERIES, steel springs

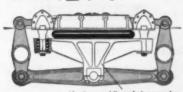


RS SERIES, rubber load cushions



Aluminum saddle standard on "RS" Series.

AR SERIES, air springs



Aluminum saddle and air reservoi standard on "AR" Series.

Now! Heat treated lightweight forged steel or forged aluminum equalizing beams for all three series of Hendrickson Suspensions.



HENDRICKSON MFG. COMPANY 8001 WEST 47th STREET LYONS (Chicago Suburb), ILLINOIS





















√ Check Your Tune-Up

CHEVROLET

ENGINES

Engine	Displace-	Bore &				
Model	ment (cu in.)	Cyl	Stroke (in.)			
Thriftmaster	235.5	6	3 9/16 x 3 15/16			
Jobmaster	261	6	33/4 x 3 15/16			
Trademaster	283	8	37/8 x 3			
Taskmaster	283	8	$3\frac{7}{8}$ x 3			
Workmaster	348	8	41/8 x 31/4			

Oil Pressure

Engine

235, 261	35	psi	@	2000	rpm
All others	30	psi	@	1200	rpm

Compression Pressure

Engine

235,	2611	30	psi	@	cranking
	speed.				

283...140 psi @ cranking speed with engine hot.

IGNITION

Cam Angle (Dwell)

All	6-cyl engines	28-35	deg
All	V-8 engines	28-32	deg

Breaker Point Gap

All	models	× .	e		.New:	.019	in.
					Used:	.016	in.

Spark Occurs

(Degrees Before Top Center)
235 5 deg
261 Top Center
283 V-8 Trademaster (with spark vacuum line disconnected—
cover opening on manifold)
4 deg
Other V-8 engines 4 deg

SPARK PLUGS

Make & Type

All	6-cyl	engines	AC 44
283			AC 42-1
348			AC 42N

Size

All	engines	*	*	×	×	*	×	*	*		14	mm

Gap

All	engines	*	*	*	*			.035	in

Torque

A11	engines					25	lb-ft
4.3.4.4	CHELLICO		- 85		16	40	110-11

VALVES

Operating Tappet Clearance

(Hot	nnl	PRR	noted

Engine

Tang	ine		
235		.006	in.
	Exhaust:	.018	in.
261	Inlet:	.006	in.
	Exhaust:	.020	in.
909	949	7000	

Seat Angle

Engine

235, 261Inlet	31	deg
Exhaust:	46	deg
All othersInlet:	46	deg
Exhaust:	46	deg

Face Angle

T7 ...

Eng	Ш	lt											
235		*	*							.Inlet:	30	deg	
								E	1	changt.	45	dea	

261			Inlet:	30	deg
			Exhaust:	46	deg
Trd	M .		Inlet:	45	deg
			Exhaust:	45	deg
Tsk	M,	348	Inlet:	45	deg
			Exhaust.	46	dea

TORQUE

Manifold Bolt

All	Engines.	Inlet:	25-35	lb-ft;
	Exhaust	center,	25-30	lb-ft;
	ends 15-			

Cylinder Head Bolt

Engine

235,	26190-9	5 lb-ft	(oiled
	threads).		
283,	348 60-7	70 lb-ft	(oiled

83, 34860-70 lb-ft (threads).

VALVE SPRINGS

Free Length

Engine

235			*	*					2.156	in.
261									2.281	in.
283									2.03	in.
348				*					2.00	in.

Pressure

Engine

100							
235		65	lb.	@	1.8	43	in
261		78	lb	@	1.8	143	in
283.	Inl	et &	Ex	hau	st	(va	lve
	open): 15	5-165	lb.	@	1.3	66 i	n.
	(valve cl	osed):	76-	84	lb	(a
	1.696 in.						
			-				-

348...Valve open: 184-196 lb @ 1.230 in.; Valve closed: 78-86 lb @ 1.626 in.

BATTERY

Amp-Hour Capacity

Truck Model	
Forward control models	72
School buses	70
All others	53

Plates Per Cell

Sch	ool	bus	n	10)(de	el	S		*			11
All	oth	ers		*				×	*				9

Terminal Grounded

1 et	minai	Grounded	
A 11	model		Nes

^{348...140} psi @ cranking speed with spark plugs removed and wide open throttle.

FRONT END

Toe-In

	All	series		*		×						*		1/8-1/4	in
--	-----	--------	--	---	--	---	--	--	--	--	--	---	--	---------	----

Camber

10-40	series				0-1	deg
50-80	series				1/4-11/4	deg

Caster

10-40	series	*	*	*		1/2-11/2	deg
50-80	series					2-3	deg

CAPACITIES

Crankcase

Engine

4	235			wit	hout	filter:	5	qt
					with	filter:	6	qt
			Ful	1 flow	w/o	filter:	6	qt
	261 283		ere	d)		;	6	qt
		Trd	M	refill	w/o	filter:	4	qt
					with	filter:	5	qt
		Tsk	M	refill	w/o	filter:	5	qt
					with	filter:	6	qt
4.5	348		:		w/o	filter:	6	qt
					with	filter:	7	qt

Transmission

Chevrolet 3-speed	23/4	pt
Chevrolet 4-speed	51/2	pt
Clark 5-speed	91/2	pt
Spicer 5-speed	12	pt
Spicer 3-speed		
auxiliary	4	pt
Powermaticrefill:	26	pt
Hydra-Maticrefill:	18	pt
with oil cooler:	20	pt
Powergliderefill:	9	pt

Rear Axle

Single-Speed

Chevrolet: ½-ton	41/2	pt
3/4- and 1-ton	$6\frac{1}{2}$	pt
1½-ton	14	pt
2- and 21/2-ton	19	pt
Eaton: 1618	191/2	pt
1790A	19	pt
Two-Speed		
All Chevrolet	20	pt.
Eaton 16802	19	pt
Eaton 17800	21	pt

Cooling System

Truck Models

Series 10-40...

With 235 engine (a): 17 qt With 283 engine (a): 17½ qt (Add ½ qt for HD system) Series 50...

With 235 engine: 18 qt With 283 engine: 18½ qt Series 60...

With 261 engine (b): 18 qt With 283 engine (b): 18½ qt Series 70, 80 & M 70...

With 348 engine (c): 30 qt (Add 1 qt with HD system)

(a) Add ³/₄ qt with Powerglide,
 (b) Add 3 qt with automatic transmission,
 (c) Add 1 qt with automatic transmission.

LUBRICATION

Crankcase

All engines...Above 32 deg use SAE 20, 20W or 10W-30. From 0 to 32 deg use SAE 10W or 10W-30. Below 0 deg use SAE 5W or 5W-20. Note: For sustained high-speed driving when daylight temperature is above 90 deg, SAE 30 may be used.

Rear Axle

All models....Use multi-purpose gear lubricant. Above 10 deg use SAE 90; Below 10 deg use SAE 80; Above 100 deg consistently use SAE 140.

On electric shift units...SAE 10 engine oil.

Transmission

Synchro mesh...SAE 90 straight mineral oil gear lubricant or SAE 90 multi-purpose gear lubricant.

Hydra-Matic... Type A automatic transmission fluid.

Powerglide...Type A automatic transmission fluid.

Powermatic...Type C hydraulic transmission fluid or Type A automatic transmission fluid.

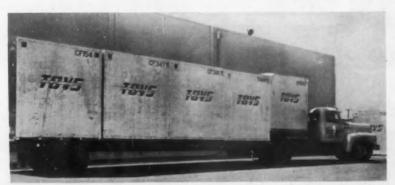
MODEL NUMBERS

Truck Model...On flat face cowl models see plate on left side of dash. All other models have plate on the body hinge pillar.

Engine...V-8 engine numbers are on top of right hand bank at front. 6-cyl engine numbers are on boss at rear of distributor.

Transmission...On 3-speed conventional and 4-speed models number is on rear face. On automatic transmission it is on left side at rear. On Clark 5-speed model number is on left rear of case. On other 5-speed models it is on right side at rear bottom.

Rear Axle...On tandem axle forward unit number is on side of carrier. On ½-ton rear axle unit number is on right front carrier flange. On all others it is on top of carrier.



This is the Dorsey Model DDG-20 low bed trailer loaded with five 8-ft sea vans. It's used here by Trans Ocean Van Service, Long Beach, Cal., to handle containerized freight shipments for overseas forwarding. Trailer is 40 ft long, has 6-in. structural full width floor sills. Undercarriage has rubber bushed, adjustable radius rods requiring no maintenance.



ananthin See Intille

UG:

TELEV



EM159

"MY CHEVY DOES ABOUT **10 HOURS' WORK** AN 8-HOUR DAY

That's Charlie Harris, driver for Masters Fast Freight Service, Inc., talking. He drives one of the two 1960 Chevrolets that work for this S. Kearney, N. J., firm, trucks that average up to 100 tough stop-and-start miles a day, weaving through metropolitan New York's traffic-clogged streets. As Mr. Harris points out, Chevy's new ride and handling ease actually speed up deliveries—the Chevrolets do about 10 hours' work in an 8-hour day; come home with their work done 2 hours sooner than the other trucks. Driver Harris states, "It means I can get a lot more work done, make more pickups and deliveries in a day's time."

They're speaking right up, these owners of '60 Chevrolets; talking about a new truck build that's the best yet at putting out extra dollars'worth of profit-producing work every day. And you'll be talking, too, once you turn these Chevy advancements loose on your money runs!

New truck-and-tire-saving ride that leads to shorter trip times, too. The biggest advance in trucking in years: independently suspended front wheels that step right over bumps, virtually eliminate most of the severe impacts that can wear out trucks and tires before their time. You profit by a big savings on maintenance; get a bigger daily work output because these trucks float you over rough roads with fewer slowdowns. And the tough torsion bar springs assist further in soaking up shocks before they can do any damage.

New longer lasting cab construction . . . new comfort that boosts driver efficiency. You'll find that drivers stay fresher, work better in a new Chevy cab. There's more leg room, head room and hip room than ever before, new visibility that's greater by more than 26%, new foampadded seat, new see-at-a-glance instrument panel. And new cab construction featuresdouble panel roof, box-section door pillars and many more-will help keep your Chevy on the road years longer.

Tough truck power that knows the most about saving money. Efficient power-the result of Wedge-Head design in the big 348-cu.-in. Workmaster and Workmaster Special V8's, engines that give you up to 230 h.p., 335-ft.-lbs. of torque, high 7.75 to 1 compression ratio . . . engines that keep an eye on costs with truckbuilt components. Look into it for yourself: Chevy's totally new working ability, available at your Chevrolet dealer's right now. . . . Chevrolet Division of General Motors, Detroit 2, Mich.

1960 CHEVROLET STURDI-BILT TRUCKS CHEVROLET



√ Check Your Tune-Up

DIAMOND T

ENGINES

Engine	Displace-		Bore &
Model	ment (cu in.)	Cyl	Stroke (in.)
DT6-110	255	6	35% x 41/8
DT6-130	292	6	37/8 x 41/8
DT6-145, DT6-170	331	6	41/8 x 41/8
DT6-185	362	6	41/4 x 41/4
DT8-207	390	8	37/8 x 41/8
DT8-235	440	8	41/8 x 41/8
H-S 590 GV3	590	6	5 x 5
Cummins Diesels			
JT-6-B, JBS	401	6	41/8 x 5
HB-600, NH-180	672	6	47/8 x 5
NHB-, HRFB-600	743	6	51/8 x 6
NTO-6B, NRT-	743	6	51/8 x 6
GM Diesels			
4-71E	283.7	4	41/4 x 5
6-71E	425.6	6	41/4 x 5
	2000	~	1/4 A U

Oil Pressure

DT6-series...

35 psi @ 2000 rpm

DT8-series...

35-40 psi @ 2000 rpm

Cummins engines....30-50 psi @ governed speed.

GM engines...25 psi, minimum @ idling speed.

Compression Pressure

(At 150 rpm)		
DT6-110	115-135	psi
DT6-130, 145	110-130	psi
Other DT- engines	130-150	ngi

IGNITION

Cam Angle

H-S 590 GV3	31-37	deg
DT6-110, 130, 145	31-37	deg
DT6-170, DT6-185	38-45	deg
DT8-series	26-33	deg

Breaker Point Gap

DT6-110,	130,	145.	 .022	in.
Other D'	r-eng	ines	 .016	in.

Spark Occurs

(Degrees	Before Top Cent	ter)	
DT6-110	**********	8	deg
DT6-130	**********	4	deg
DT6-145,	DT6-170	2	deg
DT8-207,	DT8-235	3	deg

SPARK PLUGS

Make & Type

DT6-110	CH J-7
Other DT6-engines	CH J-6
DT8-series	CH H-9

Size

All	engines	×		*			14	mm

Gap

All	engines				.025	in

Torque

All	engines	 30 lb-ft

VALVES

Operating Tappet Clearance

(Engine Hot) H-S 590 GV3...

Inlet & Exhaust: .021 in.

DT6-110, 130, 145...

Inlet & Exhaust: .015 in.

DT6-170, 185...

Inlet & Exhaust: .022 in.

DT8-series...

Inlet & Exhaust: .022 in.

Seat Angle

H-S 590 GV3...

Inlet & Exhaust: 45 deg

DT6- & DT8-series...

Inlet & Exhaust: 30 deg

Face Angle

H-S 590 GV3...

Inlet & Exhaust: $45\frac{1}{4}$ deg DT6- & DT8-series...

Inlet & Exhaust: 291/2 deg

TORQUE

Cylinder Head Bolt

H-S 590 GV3...

5/8-18: 140-160 lb-ft 7/16-20: 30- 40 lb-ft

DT-series 100-105 lb-ft

VALVE SPRINGS

Free Length

DT6-110-DT6-170...

Inlet & Exhaust: 2:1406 in.

Other DT-engines...

Inlet: 2.1406 in. Exhaust: 1.816 in.

H-S 590 GV3...

Inner: 27/8 in. Outer: 3 in.

Pressure

(At Open Length) DT6-110-DT6-170...

Inlet & Exhaust: 178-188 lb

Other DT-engines...

Inlet: 178-188 lb Exhaust: 174-192 lb

BATTERY

Amp-Hour Capacity

Truck Model

534, 534C, 634, 634C	70
723, 723JT, 731C, 921, 923	168
921C, 921E, 921N, 921R,	
923C, 931C, 933C, 950	200
All others	150

Plates Per Cell		Transmission			H100	20	0 pt
Truck Model		Warner T98. T98A	0	-4	H200	-	8 pt
		M D 740		pt	H300		6 pt
534, 534C, 634, 634C			10	pt	H140		8 pt
723, 723JT, 731C, 921, 9		Clark 205V & VO, 267V			H240, H340		2 pt
921, 921E, 921N. 921		& VO	12	pt	L100		3 pt
923C, 931C, 933C, 9	50 2	Clark 290V & VO, 291V,			L200, Q100		1 pt
All others	1	292 VO	18	pt	L300		9 pt
		Clark 268V			Q200, R300		4 pt
SAE Group		Transverter:	12	pt	Q300, QT240, QT340.		2 pt
		Converter:			QT140		4 pt
Truck Model		Spines 4550 4550	10	- 4	R100, R140		0 pt
723, 921, 923, 923C			13		R200		6 pt
921C, 921N, 921R, 931		Spicer 6452, 6453	17		RT240, RT340	40.4	2 pt
933C, 950			16	-	U200		8 pt
All others	41	Spicer 8251, 8255	24	pt	U300		9 pt
		Fuller 5A65, 5A-650	24	pt	0000 11111111111111111	-	P
Terminal Grounded		Fuller 5C72, 5C720	24				
Terminal Grounded		Fuller 10FA650, 10FB650	36		Cooling Eveter		
All models	. Ne	Fuller R96, R960	36	pt	Cooling System		
		Fuller 10B 1120	44	-	(Capacities below include		-
		Fuller R46	19	pt	Add 8 qt to figure		
					models (other than		
FRONT EN		Auxiliaries			els) with flat cast t	ype r	adi-
FRONT EN		Spicer 6041, 6231, 7231.	8	pt	ator.		
		Spicer 8031, 8035, 8341,	-	Pr	Truck Model		
Toe-In		8345	12	nt.		001/	/ -4
All models	1/8 ir			P	DT-200, DT-300	-	2 qt
					534, 634, 734R	32	qt
C					534C, 634C, 731C, 734C	38	qt
Camber (Positive)					723CJT	39	qt
921C (60FN 10 axle).	0 de	Rear Axle			734RF, 921DR, 921DBR,		
All others	1 de	Clark R1000	11	pt	921DLN, 921DBLN, 923D, 923DB	40	at
					831R	42	qt
Caster (Positive)		Eaton			921DN, 921DBN,	12	qu
		1350	13	pt	921DE, 921DBE,		
Truck Model		1790, 1791, 1792, 1793	22	pt	921DNT,		
921C (60FN 10 axle).	0 de	1892, 1893, 18802, 18803	22	pt	921DBNT	43	qt
All 6-wheelers	11/2 de		24	pt	738R. 838R	45	qt
All others	1 de		20	pt	921DFR, 921DFLN,	10	de
		22501	32	-	923DF	48	qt
		2695, 2696		pt	831RF	50	qt
King Pin Slant		22M (each axle)	12	-	921DFE, 921DFN,		4.
Truck Model		28M (each axle)	17		921DFNT	51	qt
200, 300, 534	8 de	32MFront:	28		738RF, 838RF	53	qt
634 (6-wheeler)	4 de	Rear:		pt	921C series, 923C	58	qt
921C series, 723-950 se-		36M (each axle)	24	pt	923C, 931C series,	-	4.
ries with Shuler		42M (each axle)			933C	58	8 qt
FE15, FE18 front		Front hole:		pt	2000 1111111111111111111111111111111111	-	- 4-
axles	0 de	Rear hole:		pt			
All others	5½ de	56M (each axle)	24	pt			
		Timken					
		SLD, SLDD (each axle	28	pt	LUBRICATIO	N	
		SLHDFront:		pt			
		Rear:		pt	Crankcase		
CAPACITIE	S	SQD, SQDD (ea. axle)		pt	DT-enginesAbove 32	deg	1180
				-			
		SUW (ASCH SVICE			SAR SIL BEILDE		
Crankcase		SQW (each axle)		pt	SAE 30; Below 32 SAE 20 "MS" type		use

SW3456 (each axle)..

SW3458 (each axle)..

E100

E300

(each axle)

SFD, SFDD 4600

24 pt

33 pt

28 pt

15 pt

13 pt

8 qt

14 qt

16 qt

28 qt

20 qt

22 qt

DT-engines

H-S 590 GV3

Cum JT-6B, JBS-600...

Other Cummins engines

GM 4-71E

GM 6-71E

H-S 590 GV3...Above 90 deg use

low 10 deg use SAE 20W.

(TURN TO NEXT PAGE, PLEASE)

SAE 40; Between 32 and 90

deg use SAE 30; Between 10

and 32 deg use SAE 20W; Be-

Announcing ... the latest addition to our family of quality products-

MEYERCORD DRI-MARK

DRI-MARK . . DRI-MARK . . . is Meyercord's newly perfected line of PRESSURE SENSITIVE signs and trade marks produced as dura-ble Truck Signs, Window Signs, Name-plates and Product Markings. These startling new films include:



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Now all Meyercord DRI-MARK films are protect by COLORGARD 70 ... Meyercord's exclusive labor tory-developed and perfected clear top call toughest, most durable coat yet produced for the Decal and transferable film industry. Thor-oughly tested! Two years in actual cust

Whatever your sign needs, you owe it to yourself to investigate Meyercord's complete line of products. Our factory trained representatives will be glad to assist you in the proper selection of markings for any particular requirement. Write today.



DIAMOND T

Continued from Page 109

Cummins engines... Above 90 deg use SAE 30; Between 32 and 90 deg use SAE 20; Between 10 and 32 deg use SAE 10 or 20; Below 10 deg use SAE 20W.

GM-engines...Above 32 deg use SAE 30; Between 0 and 32 deg use SAE 20W; Below 0 deg use SAE 10W.

Transmission

Spicer...Use SAE 50 engine oil all year.

Fuller...Use straight mineral gear oil SAE 140 in Summer, SAE 90 in Winter, SAE 80 below 0 deg.

Clark, Warner, and New Process ... Use straight mineral gear oil. Use SAE 140 in Summer. SAE 90 in Winter.

Rear Axle

Eaton planetary 2-speed...Use SAE 90 multi-purpose gear lubricant all year.

Eaton hypoid... Use SAE 90 multipurpose gear lubricant all year. Above 100 deg use SAE 140; Below -10 deg use SAE 80.

Clark hypoid... Use SAE 90 multipurpose gear lubricant all year. Above 100 deg use SAE 140.

Timken worm drive...Use SAE 140 all year. Below 0 deg use SAE 90.

Other Timken axles...Use SAE 140 multi-purpose gear lubricant all year. Below 0 deg use SAE 90.

MODEL NUMBERS

Truck Model... See name plate on chassis.

Engine...See plate on side of block.

Rear Axle and Transmission... stamped on name plate or on machined surface.



NON-BANDED VALVE 20,000 MILES

Note Failure caused by seat burn-ing. Compare with illustration above. RMC Heat Band prevented this type of failure.

THE SOLID STEM REPLACEMENT FOR SODIUM COOLED VALVES

RMC "Heat Banded" Valves of Bi-Metal (2 piece) construction feature Stellite faces with a Stellite band fused around the outer edge of their Austenitic (non-magnetic) steel heads. Stem diameters match sodium cooled Valves—need no special guides or installation—give maximum heat dissipation—will not seize or bind.

LOWER COST-BETTER PERFORMANCE

Heat Bands cost less than sodium Valves. Yet, they give greater performance. A trial will show you.

Actual results achieved in a Reo Gold Comet Engine by Goethols Automotive Supply. Inc., Grand Rapids,

COMPLETE COVERAGE **VALVE TRAIN PARTS**

VALVE SPRINGS VALVE LOCKS VALVE GUIDES VALVE SEATS

ROTATOR VALVE KITS VALVE SPRING INSERTS

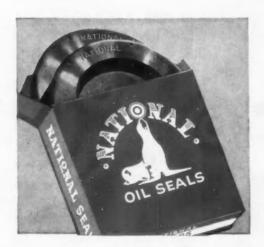
Warehoused in all principal cities. Sold by leading Replacement Parts Wholesalers everywhere.

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Better products, faster, from your National Seal distributor:



Your National Seal specialist will tailor a stock to your maintenance and repair requirements



National's "custom service"
provides the right seals at the right time so rigs get
back on the road faster

It's so easy to supply your mechanics with the right stock for their needs. Your National Seal specialist will survey your operation, set up a basic stock, inventory it regularly, and recommend what to restock. Result: You'll always have the right seals when you need them.

From then on, National Oil Seals do the rest. You can depend on exclusive National *Micro-Torc* leather and *Syntech* rubber oil seals to deliver mile after mile of trouble-free protection to vital parts. They keep lubricant where it belongs, seal out dirt, protect bearings and brake linings.

Ask your National Seal distributor about his custom fleet service. It costs you nothing extra!

NATIONAL OIL SEALS

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC. . DETROIT 13, MICHIGAN



DIVCO

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl	Bore & Stroke (in.)
Divco Super 6	252.6	6	3½ x 4%
Con F4162	162	4	3 7/16 x 4%
Con F4162 Super	162	4	3 7/16 x 43%
Con G4193	193	4	33/4 x 43/8
Her QXD3	229.7	6	3 7/16 x 41/8

Oil Pressure

Divco Super 6... 30-50 psi @ high spd. Hot

Con G4193... 20-30 psi @ high spd. Hot Other Con engines...

30-40 psi @ high spd. Hot Her QXD3...

25-30 psi @ high spd. Hot

Compression Pressure

Engine

Divco Super 6, Her QXD3... 120 psi @ cranking speed

Con G4193... 120 psi @ cranking speed Other Con engines

110 psi @ cranking speed

IGNITION

Cam Angle (Dwell)

Engine

Dive	o Super	6		*		38-45	deg
Con	engines					25-34	deg
Her	QXD3.					31-37	deg

Breaker Point Gap

Engine

Divco Super 6	.021 in.
Con F4162 (& Super)	.020 in.
Con G4193	.022 in.
Her QXD3	.018 in.

Spark Occurs

Degrees	before	(B)	or	after	(A)
	Center				

Divco	Super	6							4A
Con F	4162 S	up	er						9B
Other	Con er	gi	ne	8					10B
Her Q	XD3 .								4B

SPARK PLUGS

Make & Type

Divco Super 6...CH J-8 or AC 45 Con G4193 CH H-18Y Other Con engines...

CH 8 Com or AC 86

Her QXD3... CH J-11 or AC 48 Com

Size

Con	engine	28						18	mm
All	others							14	mm

Gar

Divco	Super	6			k		.030	in.
Con e	ngines						.035	in.
Her C	NDS						025	in

Torque

Divco	Super	6	25-30	lb-ft
Con C	4193 .		35	lb-ft
Other	Con er	igines	30	lb-ft
Her Q	XD3 .		30	lb-ft

VALVES

Operating Tappet Clearance

(Hot unless noted)

Divco Super 6.. Inlet: .012 in. Exhaust: .016 in. Con F4162 (& Super)

Inlet & Exhaust: .018 in. Con G4193...

Inlet & Exhaust: .014 in. Her QXD3Inlet: .008 in. Exhaust: .010 in.

Seat Angle

Dive	Super	6Inlet:	30	deg
		Exhaust:	45	deg
Con	G4193 .	Inlet:	30	deg
		Exhaust:	44	deg

Con	F4162	Inlet:	30	deg
		Exhaust:	45	deg

Her QXD3... Inlet & Exhaust: 30 deg

Face Angle

Divco Super 6Inlet:	29	deg
Exhaust:	44	deg
Con G4193Inlet:	30	deg
Exhaust:	44	deg
Con F4162Inlet:	30	deg
Exhaust:	45	deg
Her QXD3		
Inlet & Exhaust:	30	deg

TORQUE

Manifold Bolt

Dive	Super	6			15-20	lb-ft
Con	engines.				35-40	lb-ft
Her	QXD3				60	lb-ft

Cylinder Head Bolt

Engine

Divco Super 6	65-70	lb-ft
Con G4193	100-110	lb-ft
Con F4162		
(& Super)	70	lb-ft
Her QXD3	60	lb-ft

VALVE SPRINGS

Free Length

Con G 419:	3	*				21/8	in.
All others	*			*	*	2 1/16	in.

Pressure

Engine

Divco Super 6...
53 lb @ 1 13/16 in.
Con G4193...
76 lb @ 1 13/16 in
Other Con engines...

50 lb @ 1 11/16 in. Her QXD3..41 lb @ 1 9/32 in.

BATTERY

Amp-Hour Capacity

All models	105
Plates Per Cell	
All models	15
Terminal Grounded	
All models	Pos

SAE Group

All	models	*								1

FRONT END

Toe-In

All models 1/16 in.

Camber

All models 1 deg

Caster

All models (empty)... 11/2 deg

King Pin Slant

All models 8 deg

MODEL NUMBERS

Truck model... On capacity plate at windshield header (RH) on all models. Also stamped on right hand frame side rail at upper part of drop center (lift transmission cover to see) on models in Series 4, 5 and 7. On all other models, also on right hand frame corner gusset (lift right hand hood to see).

Engine . . . Divco Super 6-Cyl—Right front upper side of cylinder block just below cylinder head (spot painted yellow). Continental—left side of engine on data plate and on raised pad of cylinder block near head at left front. Hercules QXD3—Right side on data plate and on cylinder block near cylinder head at left side, upper center.

CAPACITIES

Crankcase

Divco Super 6	6	qt
Con F4162 (& Super)	31/2	qt
Con G 4193	4	qt
Her QXD3	5	qt

Transmission

Truck Model

Ser	ies	4,	5	&	7			*		×	,	 71/4	pt
All	ot	her	8									5	pt

Rear Axle

Truck Model

214,	224,	3	34	9	3	7	4	*			71/2	pt
Seri	ies 4,	5	&	7		ė					11	pt
All	other	rs									51/2	pt

Cooling System

Truck Model

11, 12, 13, 114, 124, 134, 364...

	11	qt
Series 4, 5 & 7	16	qt
All others	121/2	qt

LUBRICATION

Crankcase

Divco Super 6, Con G4193...

Summer: SAE 20W Winter: SAE 10W

All others ...

Summer: SAE 30 Winter: SAE 20W

Transmission

All models...Use Multi-Purpose gear lube. Summer: SAE 140; Winter: SAE 90.

Rear Axle

All models...

Summer: SAE 140 Winter: SAE 90



Three fourths of all night driving is now done with the low beam!

The low beam of G-E SUBURBAN Headlamps gives a "spotlight" effect . . . lets drivers see better in spite of oncoming lights





most often because it pushed a lot more light farther down the road. So, headlamp manufacturers put the upper beam filament on focus for maximum beam control.

Since nighttime traffic has increased tremendously, drivers find they must use the low beam more and more. So, General Electric now puts the low beam filament on focus to give maximum beam control where it's needed most-to provide a "spotlight" effect which directs more light down the right side of the road. That's why the low beam of new General Electric SUBURBAN Headlamps lets drivers see past the oncoming car when they're 75 to 200 feet apart. Only General Electric SUBURBAN Headlamps have this feature for 2-headlamp trucks. General Electric Co., Miniature Lamp Dept. M-010, Nela Park, Cleveland 12, Ohio.

Progress Is Our Most Important Product



ATTENTION OPERATORS OF FLEETS WITH 2-HEADLAMP VEHICLES!

Order G-E SUBURBAN Headlamps by number: 6-volt (6006), 12-volt (6012), and a heavy-duty version (6013). All provide approximately the same light as new trucks with 4-headlamps (whose low beam filament is also on focus).

WHY SETTLE FOR A "COMPROMISE-CONVERSION"?

DIVCO offers a Complete Factory-Built Refrigerated Truck



Divco Refrigeration components are drawn from a complete range of types and sizes—for lowest cost of operation and longest life. Whichever of Divco's 14 refrigerated truck models is the size for your payload—you'll know you have made the wisest choice of refrigeration system; the most economical all-around delivery truck performance; and, "one-source" complete responsibility for chassis, body, insulation and refrigeration.

when you select



DIVCO COMPLETE REFRIGERATION CHOICE

Divco factory insulated and refrigerated trucks offer you a complete choice of systems designed to meet your individual product delivery needs—Ammonia holdover plates • Freon plates with plug-in compressor • A variety of blown systems with Divco-designed combination over-the-road and plug-in systems • Dual temperature systems—all with the latest advancements in refrigeration engineering.

when you buy



DIVCO "ONE-SOURCE RESPONSIBILITY

Chassis, body, insulation and refrigeration are manufactured or factory-installed by Divco—for "one-source" engineering and manufacturing responsibility. No frustrating "Buck-Passing" between chassis, body and refrigeration manufacturers. Over 100 Divco sales and service Dealers from Coast-to-Coast are prepared to service your Divco Refrigerated Truck.

on the job



DIVCO ECONOMICAL PERFORMANCE

Divco trucks are designed and built from the ground up for economical multi-stop operation, with specialized chassis, engine, body and refrigeration. Acceptance? Divcos carry 80% of America's home-delivered milk. Performance: 75% of all Divcos built since 1927 are still in use! See your Divco truck selection specialist for details on the truck for your refrigerated delivery.

DW

DIVCO-WAYNE CORPORATION · America's No. 1 Transportation Specialists

√ Check Your Tune-Up

DODGE

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl	Bore Stroke	
230	230.2	6	31/4 x	45/8
230	230.2	6	31/4 x	45%
251	250.6	6	3 7/16 x	41/2
265	265.37	6	3 7/16 x	4 49/64
318	318.14	8	3 29/32 x	3 9/16
318	318.14	8	3 29/32 x	3 9/16
361	361	8	41/8 x	33/8
361	361	8	4½ x	33/8
361	361	8	4½ x	33/8
413	413.4	8	4 3/16 x	33/4
413	413.4	8	4 3/16 x	33/4
Diesels				
Cummins C-175	464	6	4.43 x	5
Cummins NH-180	672	6	4.875 x	6
Cummins NH-195	672	6	4.875 x	6
Cummins NH-220	743	6	5.125 x	6

Oil Pressure

All	6-cyl 6	engines				
		40	psi	@	800	rpm
318	V-8					
		40-50	psi	@	1500	rpm
All	other	V-8's.				
		45-65	psi	@	1500	rpm

IGNITION

Cam Angle (Dwell)

All	6-cyl	engines	36-42	deg
All	8-cyl	engines	27-32	deg

Breaker Point Gap

A11	6-cyl engines	.020	in.
	V-8 engines	.017	in.

Spark Occurs

(Degrees	B	e	f	0	r	e	T	C	Į)	Cen	ter)	
230				*				*				21/2	deg
251, 265		*								*		5	deg
All V-8's				*								10	deg

SPARK PLUGS

Make & Type

All	6-cyl	engines	AL	A-5
		*******	AL	AT-42
		V-8's	AL	AG-3

Size

All	engines			×	*	*	14	mm

Ga

00	P							
All	engines	*	*	*			.035	in.

Torque

All	engines	*******	30 lb-ft

VALVES

Operating Tappet Clearance

aber arma reb	P-: -:		
(With Hot engi:	ne)		
265	Inlet:	.010	in
	Exhaust:	.018	in
Other 6-cyl	Inlet:	.010	in
	Exhaust:	.014	in
318 (with mech	anical		
valve lifter	s)		
	Inlet:	.010	in
	Exhaust:	.018	in
All other V-8's.		sh, In	le

Seat Angle

All	models				
	Inlet	&	Exhaust:	45	des

Face Angle

All	models				
	Inlet	&	Exhaust:	45	de

VALVE SPRINGS

Free Length

Truck Model			
WM300	Inlet:	2	in.
	Exhaust:	1.88	in.

		AND AREA OF THE PARTY OF THE PA	***
D100,	D200,	D300	
	Inlot	& Evhaust . 9	in

eng	ine) .	Inlet:	2	111
		Exhaust:	1.88	in
W100 V	V200			

	Inlet	&	Exhaust:	2	in.
W300					

(With	251	engine)		
		Inlet:	2	in.

W300					
(With	318	engine)	* *		
		** *		-	

	Inlet	&	Exhaust:	2	in.
W500					

(with 200 engine)		
Inlet:	2	in.
Exhaust:	1.88	in.

W 500		
(With 318 engine)		
Inlet & Exhaust:	2	in.

D400,	S400	Inlet:	2	in.
		Exhaust:	1.88	in.

D500 (With 361 engine)..

	0.			
		Inlet:	2.312	in.
-	-			

Exhaust: 1.88 in.

Exhaust: 2.12 in.

(With 251, 265, 318). Inlet: 2 in.

Exhaust: 1.88 in.

(With 318 engine).. Inlet: 2 in.

Exhaust: 1.88 in.

C500 (With 361 engine)..

OOT	engine)		
	Inlet:	2.312	in.
	Exhaust:	2.12	in.

All other truck models...

Inlet: 2.312 in. Exhaust: 2.12 in.

TORQUE

Cylinder Head Bolt

-		engines	70	lb-ft
318	V-8 .		85	lb-ft
A11	other	V-8's	70	lb-ft

Manifold Bolt

All 6-cyl engines		
Inlet & Exhaust:	25	lb-ft
318 V-8Inlet:	30	lb-ft
Exhaust:	25	lb-ft
Other V-8's Inlet:	40	lb-ft
Exhaust:	30	lb-ft

BATTERY

Amp-Hour Capacity

All models with:
230 engine 50
251, 265 engines 59
318 engine 50
361 engine 59
413 engine 70
Cummins C-175 90
(Models with C-175 use two bat-
teries as standard, three as
extra equipment.)
Cummins NH-180, 195, 220 70
(Models with Cum NH-series en- gines use four batteries.)
Second and to at weather topic,

Plates Per Cell

All models with:	
230 engines	9
251, 265 engines	11
318 engine	9
361 engine	11
413 engine	13
Cummins engines	13

Terminal Grounded

All	models		*					Neg

FRONT END

Toe-In

All	models	*******	0-1/s in

Camber (Positive)

Truck Model

WM300	11/2	deg
D100, D200, D300	11/2	deg
P300, W100-W300	11/2	deg
D400, P400, S400	2	deg
C500, D500, S500	2	deg
W500	3/4	deg
C600, D600, D700	2.	deg
S600 (with 318 engine)	1	deg
S600 (with 361 engine)	2	deg
C700 thru C1000	1	deg
CT700, CT800, CT900	1	deg
All diesel models	1	deg

King Pin Slant

WM300, W300, W500	8	deg
W100, W200	$7\frac{1}{2}$	deg
D100-300, P300	4	deg
D400-700, S400-500	7	deg
C500, C600, P400	7	deg
S600 (with 318 engine)	51/2	deg
S600 (with 361 engine)	7	deg
C700 thru C1000	$5\frac{1}{2}$	deg
CT700, CT800, CT900	51/2	deg
All diesel models	51/2	deg

CAPACITIES

Crankcase

Eng	ine M	Iodel				
230,	251,	265,	318	 	. 5	qt
361,	413			 	. 8	qt

Transmission

Truck Model	
WM300, D300	51/2 pt
D100	31/2 pt
D200, W100, W200	23/4 pt
P300, P400	6 pt
D400, D500, D600	51/2 pt
C500, W300, W500	51/2 pt
S400, S500, S600	51/2 pt
C600, C700, C800	91/2 pt

Steel Meat Hangers



Stainless steel tubing, supplied by Wallingford Steel Co., Pittsburgh, Pa., is used for hanging meat in trailers made by Highway Trailer Co., Edgerton, Wis. Chipping of softer or plated metals used previously, re-sulted in particles falling on the meat. The stainless steel hangers keep the meat clean and sanitary.

CT700, D700	91/2	pt
C900, CT900, C1000	15	pt
CT800 (std. trans.)	91/2	pt
CT800 (opt. trans.)	15	pt
KC series (std. only)	15	pt
NC series (std. only)	17	pt

Rear Axle

Truck Model		
WM300, W300	6	pt
D100	33/4	pt
D200, D300, P300	51/2	pt
W100, W200	51/2	pt
D400, P400, S400	11	pt
C500, D500, S500	16	pt
C600, D600, S600	17	pt
W500, C700, D700	20	pt
C800, KC800	22	pt
C900, KC900	24	pt
NC900, NC1000	30	pt
C1000	33	pt
Tandems (Total capacity)		
CT700 (std. axle)	34	pt
CT700 (opt. axle)	42	pt
CT800 (std. axle)	42	pt
CT800 (opt. axle)	67	pt
CT900, KCT900, NCT1000	67	pt
KCT800, NCT800	42	pt
NCT900	$66\frac{1}{2}$	pt

Cooling System

Truck	Model		
WM300)	17	qt
D100 t	hru D300		-
	with 230 engine:	12	qt
	with 318 engine:	20	qt
P300,	P400, W100, W200		
	with 230 engine:	12	qt
	with 318 engine:	20	qt
D400	with 251 engine:	18	qt
	with 318 engine:	22	qt
D500	with 251 engine:	18	qt
	with 265 engine:	19	qt
	with 318 engine:	22	qt
	with 361 engine:	23	qt
S400	with 251 engine:	18	qt
	with 318 engine:	22	qt
W300	with 251 engine:	18	qt
	with 318 engine:	20	qt
W500	with 265 engine:	19	qt
	with 318 engine:	22	qt
S500	with 251 engine:	18	qt
	with 265 engine:	19	
	with 318 engine:	22	qt
C500,	D600, S600		
	with 318 engine:	22	qt
	with 361 engine:	23	
C600	The same of the sa	23	qt
	thru C1000		qt
CT700	thru CT900	25	qt
	ries	29	
NC se	ries	36	qt

DODGE GOES DIESEL TO BRING YOU A NEW KIND OF "JOB-RATED" ECONOMY



Meet the industry's newest line of diesel-powered trucks. Choose from four Cummins engines now teamed with Dodge dependability.

On the lookout for new ways to whittle costs? Look to Dodge! Traditionally a money-saver, Dodge for 1960 is toppling even its own economy records in fleets from coast to coast. New Dodge diesels team famous "Job-Rated" dependability with the proven economy and durability of Cummins diesel engines. It's a brand-new combination . . . and one that's tough to top! In Dodge "Job-Rated" diesels, you get a perfect

mating of engine-to-transmission-to-rear axle.

Each is engineered to work as part of an efficient drive-line team . . . a team precision-engineered for your kind of hauling. You get the right power, the right torque, the right transmission and axle ratios. Nothing's left to chance. This is "Job-Rating" . . . and it pays big dividends in thrift, performance and long truck-life!

Four Cummins engines are available in the new Dodge diesel line. In horsepower, they range from 175 to 220; in torque, from 406 to 605 lb.-ft.;



in displacement, from 464 to 743 cu. in. They're offered in Cab-Forward trucks and tractors from 21,000 lbs. G.V.W. to 76,800 lbs. G.C.W. All models give you exclusive new Servi-Swing fenders, tough, heat-treated frames, Bostrom suspended-type driver's seat, 5-way cab ventilation . . . and a host of other outstanding new features. A new line of Dodge V-8 engines, with horsepower to 228, is available for fleets preferring gasoline power.

You'd be smart to see your Dodge dealer for full information on the new Dodge diesel line.

A PRODUCT OF CHRYSLER CORPORATION



Compact 89¾" BBC makes your new Dodge diesel an easy handler, helps you meet legal length limits, boosts payload. Exclusive Servi-Swing fenders open at the flick of a latch, exposing the engine. You save time, trouble and labor costs.

DEPEND ON DODGE TO SAVE YOU MONEY IN TRUCKS

FREIGHTLINER

ENGINES

Engine	Displace-		Bore &
Model	ment (cu in.)	Cyl	Stroke (in.)
White 490-A	531	6	43/4 x 5
Hall-Scott 590 (G & B)	590	6	5 x 5
Hall-Scott 6156 (G & B)	935	6	53/4 x 6
Hall-Scott 6182 (G & B)	1091	6	53/4 x 7
Cummins Diesels			10.00
JT-6-B	401	6	41/8 x 5
NH-180*, NH-195*	672	6	47/8 x 6
HR-6-B*, HRFB	743	6	51/8 x 6
NH-220*, NHS-6-B,			
NHRS-6-B*	743	6	51/8 x 6
NRT-6-B*, NRTO-6-B	743	6	51/8 x 6
NT-6-B*, NTO-6-B	743	6	51/8 x 6
NH250, NT-380	855	6	5½ x 6
* Horizontal and vertice	eal.		-/4

Oil Pressure

White 490A40-60	ps	(@	gov-
erned speed.			
H-S 59060 psi	@	2800	rpm
H-S 615660 psi	@	2400	rpm
H-S 618210 psi	@	350	rpm
Cum JT-6-B30-60) p	si @	gov-
erned speed.			

Other Cum engines...30-50 psi @ governed speed.

SPARK PLUGS

Make & Type

Whi	te	49	10-	A							CH	D-10
H-S	59	90									CH	J-5
H-S	61	156	G	,	61	8	2	G	١.			
								-			~~~	

Inlet: CH 9 Com Exhaust: CH 6 Com

II-S 6156B, 6182 B...

Inlet: CH 6 Com Exhaust: CH 4 Com

Size

Whi	te	490	-A		*	 	*			18	mm
H-S	59	0 .								14	mm
H-S	61	56,	61	18	12					18	mm

White 49	0-A		 			.025	in
H-S 5900						.025	in
H-S 590H						.015	in
H-S 6156	, 618	2			.018	3023	in.

IGNITION

Cam Angle

White 490-A	31-37 deg
H-S 590	31-37 deg
H-S 6156, 6182	27-37 deg

Breaker Point Gap

Whi	te 490)-,	A						à	.022	in.
H-S	590						*		*	.022	in.
H-S	6156.	6	1	8	2					.021	in.

Spark Occurs

(Degrees Before Top Cent	er)	
White 490-A	6	deg
H-S 590G	5	deg
H-S 590B	10	deg
H-S 6156G, 6182G	2	deg
H-S 6156B	4	deg
H-S 6182B	8	deg

VALVES

Operating Tappet Clearance

White 490-A	Z	ero
H-S 590 (Cold)		
Inlet & Exhaust:	.022	in.
H-S 6156, 6182 (Cold)		
Inlet:	.021	in.
Exhaust:	.031	in.
Cum JT-6-BInlet:	.015	in.
Exhaust:		
Cum N-seriesInlet:		
Exhaust:	.027	in.

Cum H-seriesInlet: .014 in. Exhaust: .022 in. (Cummins specs. are with oil temperature @ 140 deg.)

Seat Angle

Whi	te 490)-A, I	1-8	590		
	1	Inlet	&	Exhaust:	45	deg
H-S	6156.	618	2.	Inlet:	30	deg

Exhaust: 45 deg

Cummins engines...

Inlet & Exhaust: 30 deg

Face Angle

H-S 590Inlet: 451/4	deg
Exhaust: 45	deg
H-S 6156, 6182Inlet: 30	deg
Exhaust: 44½-44¾	deg
Cummins engines	
Inlet & Exhaust: 30	deg

TORQUE

Cylinder Head Bolt

White 490-A		.105-110	lb-ft
H-S 590			
5/8-18	thread:	140-160	lb-ft
7/16-20	thread:	30- 40	lb-ft
C TO A D			

Cum JT-6-B... 11/16: 300 lb-ft 3/4: 400 lb-ft NH-250, NT-380 325 lb-ft

Other Cum430-450 lb-ft

VALVE SPRINGS

Free Length

White 490-A	2.531	in.
Cum JT-6-B	2.364	in.
Cum NH-220	3.160	in.
Cum HR-6-B, HRFB .	3.484	in.
Cum NH-250, NT-380.	3.230	in.
Other Cum engines	3.313	in.

Pressure				
White 490-A				
177-187	lb	@	1.612	in.
H-S 590				
Inner: 80	lb	@	13/4	in.
Outer: 144	lb	@	1 13/16	in.
H-S 6156, 6182.				
Inner: 110	lb	@	1.938	in.
Outer: 143	lb	@	2.000	in.
JT-6-B 111	lb	@	1.610	in.
HR-6-B, HRFB				
179-198	lb	@	2 3/16	in.
NH-220 104-114	lb	@	1 49/64	in.
NH-250, NT-380				

110-120 lb @ 1 49/64 in. Other Cum engines

BATTERY Amp-Hour Capacity

All models	152
Plates Per Cell	
All models	19-21
Terminal Grounded	Dos

FRONT END

Toe-In

Camber	
4 x 4 models	 0 deg

1/8 in.

All models

4 x 4 models 0 deg All others 1 deg

Caster

(Specification is for left. Right should be ½ deg higher.)

Truck wheelbase

115-150	in.					2.7-3.2	deg
150-200	in.					2.2-2.7	deg
200 in.	up					1.7-2.2	deg
4 x 4 m	odel	R				5 -6	deg

King Pin Slant

WF	5844	T								0	deg
	other									5	deg

CAPACITIES

Crankcase

White 490-A										16	qt
H-S 590			*	*					ķ	14	qt
Cum JT-6-B	*				×		*			16	qt
Other Cum er	11	gi	I	16	200	1			*	28	qt

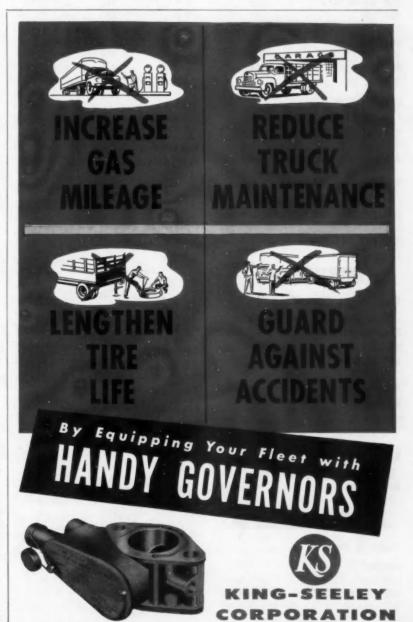
Transmission

Fuller:	
4A-86, 4B-86	17 pt
5C-72, 5C-720	26 pt
5A-1120, R-95, R-950	32 pt
R-96, R-960	33 pt
Spicer:	
8041 & 45, 8241 & 45	16 pt
8051 & 55, 8251 & 55	24 pt
8125	28 pt
Fuller auxiliaries	13 pt
Spicer auxiliaries	12 pt

Rear Axle

Timken:	
F-233	12 pt
QT-300	29 pt
R-100, R-140	30 pt
QT-140	

R-200	36	pt	Timken SQW Front: 40 p	t
U-300	39	pt	Rear: 40 p	t
R-330	44	pt	Timken SLD, SLDD	
R-230	45	pt	Front: 28 p	t
U-200	58	pt	Rear: 28 p	t
Autocar GG	18	pt	Timken SQD, SQDD	
Eaton 22501	32	pt	Front: 22 p	t
White 89C, 189C	22	pt	Rear: 22 p	t
White 134C	26	pt	Timken SQHD	
Freightliner (Dual)			Front: 34 p	it
Front:	32	pt	Rear: 34 p	t
Rear:	32	pt	Timken SLHD	
Timken 3458 Front:	32	pt	Front: 32½ p	t
Rear:	32	pt	Rear: 321/2 p	it



FORD

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl	Bore & Stroke (in.)
223 Six	223	6	35/8 x 3 39/64
292 MD & HD	292	V-8	33/4 x 3 5/16
302 HD	302	V-8	35/8 x 3 21/32
332 HD	332	V-8	3 51/64 x 3 21/32
401 SD	401	V-8	41/8 x 33/4
477 SD	477	V-8	$4\frac{1}{2}$ x $3\frac{3}{4}$
534 SD	534	V-8	4½ x 4 13/64

Oil Pressure

(At	2000	r	or	n,	e	n	ıg	1	n	e	Hot)	
223,	292	MI)	&	1	H	I)			35-55	psi
302,	332										35-55	psi
All	otnei	rs									35-65	psi

Compression Pressure

(At	cran	king	1	8]	p	e	9	d)		
223,	292,	302							140-160	psi
									130-150	psi
	477,								130-170	psi

IGNITION

Cam Angle (Dwell)

(@ idle speed)

Engine

223	Six								35-38	deg
V-8	eng	ir	16	28	3				26-281/2	deg

Breaker Point Gap

Engine

-										
223	Six								.024026	in.
V-8	eng	ri	n	e	8				.014016	in.

Spark Occurs

(De	grees	Be	ef	0	r	e	•	T	0	p	,	(16	en	ter	.)	
All	engin	es														4	deg

SPARK PLUGS

Make & Type

Engine

223	Six							×		CH	860
292	MD	&	1	Η	D)				CH	860
All	othe	rs								CH	F-10

Size

All	engines	w	,					18	mn
All	engines	*	9	Þ.		*		18	mi

Gap

All engines	028-032	in

Torque

All	engines	15-20	lb-ft

VALVES

Operating Tappet Clearance

(Hot unless noted)

223 Six...

	In	tal	ce	&	Exhaust:	.019	in.
292	MD	&	H	D.			

Intake & Exhaust: .018 in. All others...

Intake & Exhaust: .020 in.

Seat Angle

All engines...

Intake & Exhaust: 45 deg

Face Angle

		-						
223	Six,	All	HD's			*	45	deg



"Let's park by houses and scare people!"

VALVE SPRINGS

Pressure—Valve Open

223, 292, All HD's...

161-177 lb @ 1.39 in.

SD engines....

178-192 lb @ 1.28 in.

Pressure—Valve Closed

Engine

223, 292, All HD's...

71-79 lb @ 1.78 in.

SD engines....84-89 lb @ 1.70 in.

TORQUE

Cylinder Head Bolts

(Oile	ed th	ire	a	d	8)			
223,	292							65- 75	lb-ft
302.	332							95-110	lb-ft

Manifold Bolt

All engines...

Intake & Exhaust: 23-28 lb-ft

401, 477, 534 130-150 lb-ft

BATTERY

Amp-Hour Capacity

Truck Model

F-100	thru	F-70	0			*	. 55
F-750	thru	F-11	00				. 70
C-550	thru	C-70	0				. 55
C-750	thru	C-11	00				. 70
T-700	w/292	HD	eng	ine			. 55
T-700	w/30	2 eng	gine				. 70
T-750	thru	T-95	0				. 70
B seri	ies						. 70
P seri	es						. 55

Number of Plates

Truck Model

thru	F-70	00.							66
thru	F-11	100							78
thru	C-70	00.							66
thru	C-110	00.							78
w/29:	2 HD	en	gi	ne	3				66
w/30	2 eng	gine	9						78
thru	T-95	50.							78
ries .									78
ies .					*		•		66
	thru thru w/29 w/30 thru ries .	thru F-11 thru C-70 thru C-110 w/292 HD w/302 eng thru T-98 ries	thru F-1100. thru C-700. thru C-1100. w/292 HD en w/302 engine thru T-950.	thru F-1100 thru C-700 thru C-1100 w/292 HD engi w/302 engine thru T-950	thru F-1100 thru C-700 thru C-1100 w/292 HD engine w/302 engine thru T-950	thru F-1100 thru C-700 thru C-1100 w/292 HD engine w/302 engine thru T-950	thru F-1100 thru C-700 thru C-1100 w/292 HD engine w/302 engine thru T-950	thru F-1100 thru C-700 thru C-1100 w/292 HD engine w/302 engine thru T-950	thru F-700 thru F-1100 thru C-700 thru C-1100 w/292 HD engine w/302 engine thru T-950 ries

Terminal Grounded

All trucksN

FRONT END

Too In

All trucks (Maximum) 1/16 in.

COMMERCIAL CAR JOURNAL, April, 1960

Camber		Transmission	T-700 (302 V-
All trucks	1 deg	Ford 3-speed 23/4 pt	B-700, F-700,
Max. var. between wheels:		W/extension hsng.: 3½ pt	B-750, F-750,
white and the same of th	/4 ace	War O'dr 3-speed 3½ pt	F-800, T-800
Caster		War M.D. 3 speed 3 1/3pt	B-500, B-600
		War H.D. 3-speed 5½ pt	With V-
Truck Model		War 4-speed 8 pt	C-750, C-800
F-100, F-250, C-550,		Clark & N.P. 5-speed 9 pt	C-550, C-600,
C-600, P-500 (137		Clark H.D. 5-speed 11½ pt	T-950 (534 S.
in. wlbse) 3	deg	Spicer 5-speed13-17 pt	F-850-F-1000
F-100, F-250, F-500		Spicer 3-speed Aux 4-8 pt	T-850, T-950
(137 in. wlbse) w/		Spicer 4-speed Aux 12 pt	F-1100
Pwr strg: 6		Fuller 8-speed 17 pt	C-850-C-1000
	1/4 deg	Fordomatic 20 pt	C-1100
F-350, F-500 (130 in.		Cruise-O-matic 20 pt	
	3/4 deg	Transmatic drive 38 pt	
Power steering: 6	3/4 deg		LUBF
P-350 4	- 69	Bonn Auto	Combons
P-400 3	-	Rear Axie	Crankcase
P-400 w/Pwr strg: 6	deg	Ford 3300 4½ pt	All engines
B-500, B-600, F-500,		Spicer 44-4F (4 whl dr) 41/2 pt	SAE 40.
F-600 (154 in.	1/ dom	Spicer 60 6 pt	deg use S
-	1/2 deg	Timken B140 8 pt	32 deg us
D 200 (1211 1 1 1	1/2 deg	Timken C-100, D-100 15 pt	10 to -1
	½ deg	Timken F-104, F-106 15 pt	Below —
Tower steering.	72 deg	Timken U-200 38 pt	Toursmission
F-1000, F-1100, T-950		Timken U-300 (2-spd.) 39 pt	Transmission
(with 9,000, 11,000		Eaton Axles:	Fordomatic
& 15,000 lb frt		Single-Speed	Transmat
axle) 3	deg	1614, 1615 17 pt	matic tra
T-800, T-850 (with 15,-		1790-A, 1791-A 22 pt	Conventional
000 lb front axle) 37/	16 deg	1892, 1893 21 pt	missions
C-950, C-1000, C-1100	To deg	1911 24 pt	engine oi
	7/8 deg	Two-Speed	Dans Aula
All others 3			Rear Axle
		1350, 13602, 13800 13 pt 16802, 16803 20 pt	Tree
King Pin Slant			20 000
		17800, 17801	20 008
Truck Model		19503 24 pt	a specu rear
F-100 thru F-600 4	-		engine of
F-100, F-250 (4 whl. dr.)	1/2 deg	Tandems—Each Axle	10W, belo
P-350 thru P-500 4	deg	22MForward & Rear: 10 pt	
C-250, C-1100, F-1000,		Power Divider: 7 pt	
F-1100, T-800,		28MForward & Rear: 17 pt	MULLE
T-850, T-950 (with		Power Divider: 9 pt	
15,000 lb frt axle) 8	deg	34MForward & Rear: 23 pt	
B-500, B-600 4		Power Divider: 3 pt	toursk com
		38DForward & Rear: 24 pt	ploto T
Lin Others 0	½ deg	Power Divider: 3 pt	right has
			series tru
		Cooling Systems	door on a
		Truck Model	number's
CAPACITIES		(Add 1 qt with heater)	give the
		F-100—F-600, B-500,	then a le

Crankcase

Engine

(Add 1 qt with filter change)	
223 Six, 292 MD V-8	gt
292 HD V-8	qt
802 HD V-8, 332 HD V-8 8	qt
(Add 2 qt with filter change	
the following engines)	
401-, 477-, 534 SD V-8 9	qt

(Add 1 qt with heater)		
F-100—F-600, B-500,		
B-600 (6 cyl)	171/2	qt
F-100-F-350 (V-8 en-		
gine and single		
rear wheels)	211/2	qt
F-350 (dual rear whis)	22	qt
F-500, F-600 (V-8 en-		-
gine)	22	qt
P-350-P-500 (6 cyl)	181/2	at
P-350 (V-8 engine)	22	qt
Company of the compan		-

T-700 (302 V-8 engine)	26	qt
B-700, F-700, T-700	22	qt
B-750, F-750, T-750	26	qt
F-800, T-800	26	qt
B-500, B-600 (6 cyl)	171/2	qt
With V-8 engine:	22	qt
C-750, C-800	29	qt
C-550, C-600, C-700	28	qt
T-950 (534 S.D. V-8)	47	qt
F-850—F-1000	46	qt
T-850, T-950	46	qt
F-1100	47	qt
C-850—C-1000	51	qt
C-1100	52	qt

RICATION

.. Above 100 deg use From 32 deg to 100 SAE 30. From 10 to se SAE 20-20W. From 10 deg use SAE 10W. -10 deg use SAE 5W.

c, Cruise-O-matic. tic... Type A autoansmission fluid.

and Auxiliary trans-..... SAE 50 H.D. oil.

gear lubricant; Above use SAE 90, Below g use SAE 80,

axle shift unit...Use oil; Above 0 deg SAE low 0 deg 3 parts SAE 1 part kerosene.

L NUMBERS

el... Given as part of rial number on rating The plate is on the and dash panel on Pucks, on the glove box all others. The serial s first three symbols truck model number, etter shows the engine model. The symbols and their meaning are: C-292 MD, D-292 HD, F-332, J-223, N-302, P-401, Q-477, R-534.

Transmission model....plate on left side of transmission.

Rear Axle-Code number given on truck rating plate - See above.

"Reliable Ford Trucks provide service for Spector

says John Ferguson
Vice-President
Equipment and Maintenance
Spector Freight System, Inc.
Chicago, Illinois



SPECTOR, The Life's Wonderful Line, serves points in all of the 50 states, with direct service between 15 of America's top 20 industrial and commercial markets. Its more than 15,300 miles of interstate highway routes provide coverage of the North and Central East and Middle America.

"For consistently dependable customer service we rely on modern training, facilities and equipment . . . modern equipment like our new Ford Tilt Cab trucks and tractors.

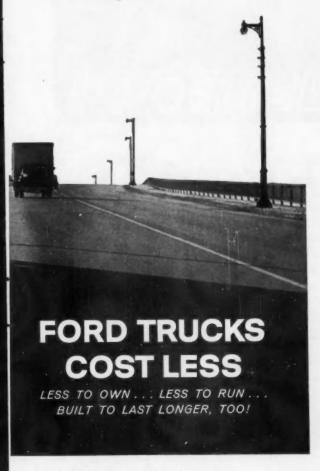
"We have over seventy Ford power units from C-700 straight trucks to



consistent, <u>customerized</u> shippers!"

C-1000 Super Duty tractors. These Tilt Cabs are used for city pickup work and on shuttle runs between terminals. They provide excellent maneuverability and handling ease in congested traffic areas. And they have the stamina needed for this stop-and-start type of operation.

"The decision to purchase Ford Trucks is based on our total marketing concept. Through our Research and Development Division, we strive to find the best trucks to improve customer service in terms of both route time and safe handling."



Again in '60 FORD TRUCKS



offer Certified Savings!

CERTIFIED ECONOMY . . .

Yes, this year, if you buy a Ford Truck, you get a truck with certified economy in the three major expense items: gasoline, tires and initial price.



Best Gas Mileage! Results of second running of Economy Showdown U.S.A., show 1960 Ford ½-ton Pickups won every test—beat the average of other four leading makes by 13.1%.



Double Tire Life! Under average conditions, Ford's truck-type suspension gives double the front tire life of that obtained with "soft-type" independent suspension used on some 1960 trucks.



Lowest Prices!* New 1960 Ford ½-tonners are priced from \$33 to \$181 below those of leading competitive makes. List prices of Ford Light and Medium Duty models are lowest in their class.

CERTIFIED DURABILITY . . .

The refinements built into the '60 Ford Heavy and Super Duty Trucks for longer life and greater reliability will also bring savings to your operation.



Automatic Radiator Shutters, standard on all Super Duty models, add considerably to engine life. Reduction of coolant temperature variations from a 79° range to a 20° range means less expansion and contraction, more efficient combustion and better lubrication.



Dynamometer Tests of Ford's submergedtype electric fuel pump showed no vapor lock at temperatures up to 200° F. Incipient vapor lock with mechanical fuel pump resulted in a 9% power loss under the same conditions.



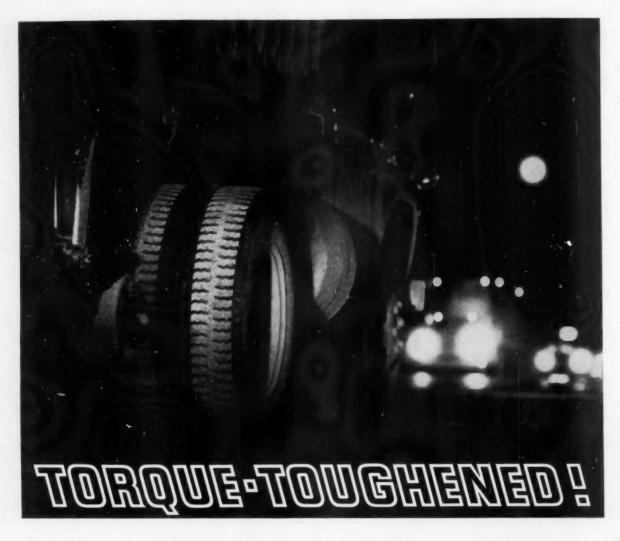
Shaker Table Tests plus constant exposure to oil, water and heat proved Ford's 1960 wiring harness to be three times longer lived than the 1959 harness.

CERTIFIED ECONOMY REPORTS . . .



Certified results of these and other tests conducted by America's leading automotive research organization, plus a comparison of manufacturers' suggested list prices, are now available at your Ford Dealer's. Take him up on his offer to check the records . . . see and drive the new Ford Trucks . . . and you'll save for sure!

*Based on latest available manufacturers' suggested retail prices, including Federal excise tax, excluding dealer preparation and conditioning and destination charges.



NEW PULL-POWER PLUS DOUBLE MILEAGE WITH FIRESTONE'S DRIVE-WHEEL TIRE

Firestone's Super Mileage Transport Cross Bar tire delivers two big extras: one, new traction to get the most out of beefed-up power plants; two, 81% deeper rib that doubles original tread mileage—then gives 25% more mileage after regrooving! These great tires are built with Firestone Rubber-X, the longest-wearing rubber ever used in Firestone tires. Allnylon Firestone Shock-Fortified cord resists sledge-hammer impacts, helps prevent heat blowouts and flex breaks. Only Firestone tires are torquetoughened for double duty on drive-wheels. Get Firestone tubeless or tubed Super Mileage Transport Cross Bar tires at your Firestone Dealer or Store.

ALWAYS SPECIFY FIRESTONE TIRES ON NEW TRUCKS



Super Mileage Transport® Cross Bar



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COMMERCIAL CAR JOURNAL, April, 1960

For fleets that roll 'round the clock "Scotchlite" Reflective Sheeting provides an effective and economical marking material that's seen day and night! Colorful, fully reflective fleet markings stand out in headlight beams with brilliant clarity after dark in any weather-a vital safety feature. There's important advertising value, too, in markings of "Scotchlite" Sheeting—because your name, your message is never hidden by darkness. Resistant to abrasion, impact, effects of weather, temperature and chemicals, "Scotchlite" Sheeting fulfills the special demands of fleet operations. Economy starts with fast, simple application, lasts for years because "Scotchlite" Sheeting has built-in durability.

REFLECTIVE SHEETING

Ask your Fleet Mark '60 Man about modern marking systems for your fleet. Send this coupon today:



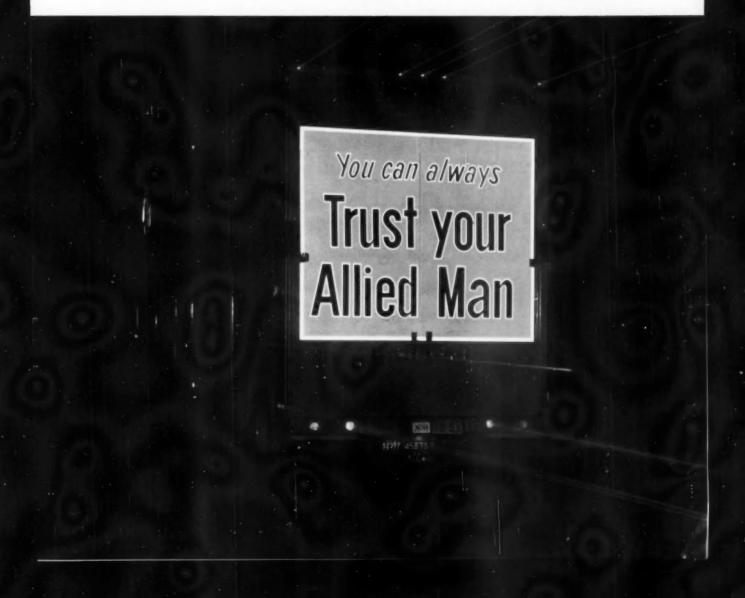
MINNESOTA MINING AND MANUFACTURING CO. DEPT. FM60, ST. PAUL 6, MINNESOTA

Please have a Fleet Mark '60 Man arrange an appointment with me. I am interested in

"Scotchlite" Sheeting for 24-hour fleets "Scotchcal" Film for daytime fleets

Firm_

BRIGHT MARKINGS FOR TRUCKS THAT TRAVEL UNDER SUN AND STARS





Learn more about marking systems for daytime fleets. Fill out the coupon on the reverse side.



COLORFUL MARKINGS FOR TRUCKS THAT WORK FROM DAWN TO DUSK

versatile but truly economical markings. There are no restrictions on size, shape, color or complexity of design. Emblems and markings literally apply at a touch to eliminate costly hours of painting and drying time! "Scotcheal" Film markings stay on, stay bright for years—actually last through several vehicle repaints with little maintenance. Proof of exceptional performance? Used to mark supersonic jets. Give your fleet the smartest markings under the sun. Fill out the coupon on the reverse side for details.

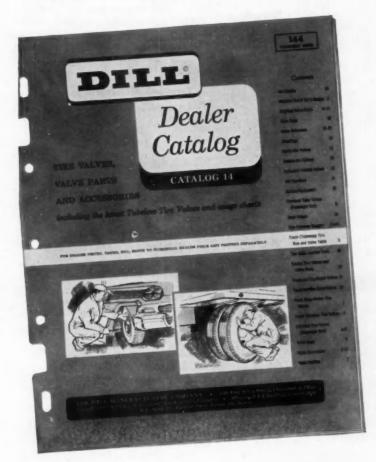


MINNESOTA MINING AND MANUFACTURING COMPANY





FREE



NEW DIL-Tire Valves and Parts Catalog

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- Current Truck Tubeless Tire Valve Tables... including applications for Johnaster Rims and valves for drop-center tubeless and tubes.
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- Airplane Valves and Valve Parts...and Airplane Tire Gauges.
- New Air Chucks... and a complete line of tire valve service tools.

Ask your distributor or send the coupon below for a free *Dill Tire Valve and Parts Catalog* No. 14. If you service giant off-the-road equipment, ask your supplier for Catalog OR-1.

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NAME....

COMPANY_

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ZONE___STATE

√ Check Your Tune-Up

FWD

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl		re & roke
IHC BD-240	240	6	3 9/16	x 4 1/6
IHC BD-282	282	6	3 13/16	
IHC BD-308	308	6	3 13/16	
IHC RD-372	372	6	43/8	x 41/8
IHC RD-406	406	6	43/8	x 41/2
IHC RD-450	450	6	43/8	x 5
JHC RD-501	501	6	41/2	x 51/4
Wau 145 GK	779	6	51/4	x 6
Wau 145 GKB	779	6	51/4	x 6
Diesels				
GMC 3-71	213	3	41/4	x 5
GMC 4-71	284	4	41/4	x 5
GMC 6-71	426	6	41/4	x 5
Cum JT-6-B	401	6	41/8	x 5
Cum HR-6-B	743	6	51/8	x 6
Cum HRF-6-B	743	6	51/8	x 6
Cum NH-6-B	743	6	51/8	x 6

Oil Pressure

Engine

IHC BD-240 thru RD-406.... 40-45 psi @ 1200 rpm

IHC RD-450, RD-501....

40-45 psi @ 1500 rpm Wau 145 CK...40 psi @ 2000 rpm Wau 145 GKB..40 psi @ 2400 rpm GMC engines....25 psi Minimum Cummins engines....

30-50 psi @ Gov. speed

Compression Pressure

Wau engines 115 psi GMC engines 325-400 psi

IGNITION

Cam Angle

All gasoline engines 31-37 deg

Breaker Point Gap

IHC engines018—.024 in. Wau engines018 in.

Spark Occurs

SPARK PLUGS

Make & Type

IHC BD-2 engines....

CH J-8, AC 43 Com or AL A5 IHC RD engines....

CH J-6, AC 43 Com or AL A5
Wau engines CH J-9

Size

All IHC engines 14 mm Wau engines 18 mm

Gap

Torque

All engines 28-30 lb-ft

BATTERY

Amp-Hour Capacity

Models with	
IHC BD-engines	70
IHC RD-engines	90
Wau engines (2 batteries).	140
Diesel engines	150

Plates Per Cell

 Models with...

 IHC engines
 13

 Wau engines
 21

 Diesel engines
 19

SAE Group No.

Models with....

IHC BD-engines.....HO-12-70 or 12H-65R.

IHC RD-engines...HDD-5, SH-90
Wau engines...HDD 4 or HH-150R
GMC engines4D-153
Cum enginesRD-153

Terminal Grounded

All models Pos

FRONT END

Toe-In

All models 0-1/8 in.

Caster (Positive)

All models 2 deg

Camber (Positive)

All models 1 deg

King Pin Slant

All models 8 deg

VALVES

Operating Tappet Clearance

IHC engines...Inlet & Exhaust: .024-.026 in.

Wau 145GK...Inlet: .012-.014 in. Exhaust: .023-.025 in.

Wau 145GKB..Inlet: .012-.014 in. Exhaust: .029-.030 in.

Seat Angle

IHC BD-240, RD-501....

Inlet & Exhaust: 30 deg

Other IHC engines....

Inlet & Exhaust: 15 deg Wau engines....

Inlet & Exhaust: 30 deg

Face Angle

IHC BD-240....

Inlet & Exhaust: 30 deg

Other gasoline engines....

Inlet & Exhaust: 45 deg

TORQUE

Manifold Bolt

All	IHC	engines	25-30	lb-ft
Wa	u eng	ines	30	lb-ft

Head Bolt

IHC BD-24085-95	lb-ft
IHC BD-282, BD-30875-85	lb-ft
Other IHC engines100-110	
GMC engines165-175	lb-ft

VALVE SPRINGS

Free Length

Engine

IHC	BD-240		2	11/16	in.
IHC	BD-282,	BD-308.	2	3/16	in.
IHC	RD-372,	RD-406,	R	D-450.	
		Inner:	2	11/32	in.
		Outer:	2	9/16	in.
IHC	RD-501.	Inner:	2	3/4	in.
		Outer:	2	13/16	in.
Wau	engines	Inner:	3	3/32	in.
		Outer:	3	7/16	in.

Pressure

At Open Length

Engine

IHC BD-240....

149-158 lb @ 1 11/16 in. IHC BD-282, BD-308....

186-196 lb @ 1 15/32 in.

IHC RD-372, RD-406, RD-450.... Inner: 83-88 lb @ 1.503 in. Outer: 133-141 lb @ 1.706 in. IHC RD-501....

Inner: 82-88 lb @ 1.75 in. Outer: 160-170 lb @ 1.75 in.

Wau 145GK.... Inner: 75-87 lb @ 2 1/16 in. Outer: 109-127 lb @ 2% in.

Wau 145GKB.... Inner: 75-87 lb @ 2 1/16 in.

Outer: 109-127 lb @ 2 1/16 in. GMC engines....

841/2-891/2 lb valve open

CAPACITIES

Crankcase

IHC BD-series										7	qt
IHC RD-series										9	qt
Wau engines										18	qt
GMC 3-71										18	qt
GMC 4-71					,					21	qt
GMC 6-71										25	qt
Cum JT-6-B .		0	6	*	×	×		×		16	qt
Other Cum en	g	i	n	e	8		*			28	qt

Transmission

F51C	12	pt
2B-5A1120	29	pt
2B-5A43	16	pt
2B-10A1120	32	pt
2B-R46	17	pt
2B-5A62, 5C62, 5C72	24	pt
2B-10CA65	31	pt
	33	pt
35 (incl. transfer case)	40	pt
Auxiliaries		
271, 272, 371, 372	8	pt
273, 373		

Rear Axle

13B				*										6	pt
13C				*		*								9	pt
23,	3	3	9.	0.0	33	3,	A							16	pt
53				*	*									24	pt

Cooling System

cooling system		
Blue Ox, 140, 140COE,		
U-150	26	qt
181, 181COE	28	qt
182, 182COE, 202,		
202COE	30	qt
232, 232COE, 6-222,		
6-282	30	qt
284, 284COE, M284,		
6-324	31	qt
A-329, 408, 408COE,		
409, 409COE, 6-609	53	qt

LUBRICATION

Crankcase

All gasoline engines... Use heavy Duty engine oil (MIL-L-2104-A). Above 70 deg use SAE 40. From 50 to 70 deg use SAE 30 for light duty, SAE 40 for heavy duty. From 30 to 50 deg use SAE 20/20W for light duty, SAE 30 for heavy duty. Below 30 deg use SAE 20W.

GMC diesels...For general service use SAE 30 engine oil. From 0 to 30 deg in continued cold use SAE 20W. Below 0 deg use SAE 10W.

Cummins diesels...Above 80 deg use SAE 30 straight engine oil. From 20 to 80 deg use SAE 20 straight engine oil. Below 20 deg use SAE 10W straight engine oil.

Transmission

All models...Use straight mineral oil (FWD Spec. No. T-46-1); Summer: SAE 140; Winter: SAE 90.

Rear Axle

All models...Multi-purpose lube (MIL-L-2105); Summer: SAE 90; Winter: SAE 80.

MODEL NUMBERS

Truck Model...See plate on left cab door.

Engine...Waukesha — plate on right of block near front. All others—plate on head near left front.



Convertible Cattle Hauler

American Body & Trailer, Inc., Oklahoma City, Okla., makes this "Dual-Haul" cattle hauler. The possum belly van hauls cattle to market. Special weatherproof ¼-in. plywood panels (stored in racks in the upper nose

section) are slipped into place to convert the trailer to a dry freight van, for the return trip. Center double-deck drops to lower deck level and compartment partitions fold up. Conversion gives full 40-ft load space. Van has an aluminum roof.



Ups mileage between overhauls from 40,000 to 100,000 GULF MAKES THINGS

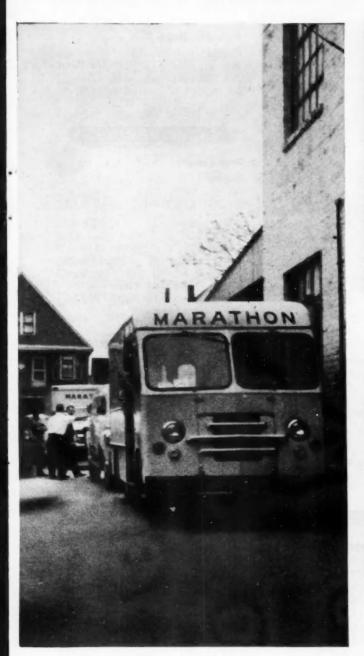
Eight years ago, when Larry Kaiser became Garage Superintendent for Marathon Linen Service, Detroit, their delivery trucks were averaging about 40,000 miles between engine overhauls. Fleet operating costs averaged 13¢ a mile. This didn't suit Mr. Kaiser at all.

Now the 30 trucks in Marathon Linen's stop-and-go delivery fleet average 100,000 miles and more between engine overhauls at an operating cost of only 9¢ a mile.

And this in spite of spiralling inflation since 1951!

How did Mr. Kaiser do it? First he set up a new system of service records to keep closer tabs on operation and maintenance costs. Then he decided on a policy of "more frequent oil changes instead of too frequent overhauls." Each truck has an oil change every month.

After an intensive test program using five or six premium grades of lubricating oils from different





Properly timed oil changes cost less than too-frequent engine repairs. At Marathon Linen Service, Detroit, fleet mileage between overhauls has more than doubled since they changed to Guiflube Motor Oil X.H.D.



"We've cut operating costs over 30% using Gulflube Motor Oil X.H.D.," says Larry Kaiser, left, Garage Superintendent for Marathon Linen Service. At right is Earl Brandau, Gulf Sales Representative.

using Gulflube Motor Oil X.H.D.

RUN BETTER!

sources, Mr. Kaiser chose Gulflube Motor Oil X.H.D. for all trucks in the fleet. Marathon Linen Service found that Gulflube Motor Oil X.H.D. keeps engines cleaner, sharply reduces the accumulation of harmful sludge and varnish, prevents rust formation and reduces rate of wear. With increased mileage between overhauls and a 30% cut in fleet operating costs, Marathon has plenty of proof that Gulf makes things run better!

See for yourself how Gulflube Motor Oil X.H.D. can help reduce your fleet operating costs. Call or write your nearest Gulf office today.

GULF OIL CORPORATION

Dept. DM, Gulf Building Pittsburgh 30, Pa.



√ Check Your Tune-Up

GMC

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl	Bore & Stroke (in.)
270	269.5	6	3 25/32 x 4
305	304.7	V-6	41/4 x 3.58
351	351.2	V-6	4 9/16 x 3.58
401	400.9	V-6	47/8 x 3.58
702	702.9	V-12	4 9/16 x 3.58
Diesels			
6V-71	425.6	V-6	41/4 x 5
6-71SE	425.6	6	41/4 x 5

Oil Pressure

Engine

270.....5 psi, minimum @ idle. All other gasoline engines 40 psi @ idle.

All diesels...25 psi, minimum @ governed speed.

Compression Pressure

Engine

270......140 psi @ 125 rpm All other gasoline engines...125 psi @ cranking speed.

IGNITION

Cam Angle

Engine

28-35 deg 270, 305, 351 401 33 deg 702 47 deg

Breaker Point Gap

All gasoline engines. .016 in.

Spark Occurs

(Degrees Before Top Center) All gasoline engines... 5 deg

SPARK PLUGS

Make & Type

All gasoline engines...

AC 44 Com

Cylinder Head Bolt

Engine

270 90-100 lb-ft 305, 351, 401, 702 65- 72 lb-ft 6-71E 165-175 lb-ft

VALVE SPRINGS

Free Length

Engine

270 21/8 in. 305, 351, 401, 702.... 2.270 in.

Pressure

Engine

270....124-140 lb compressed to 1.505 in. All other gasoline engines...196-212 lb compressed to 1.495 in.

BATTERY

Amp-Hour Capacity

Truck Model

1000, 1000 Suburban. K1000, 1500, K1500, 2500, V3000, V3500, V4000, A4000, BV4000, BA4000, LV4000, LA4000, P1500, P2500 53 5000, B5000, BW5000, L5000, LW5000 61 B5500, B6000, BWV5500, BWA 5500, L5500, LA6000, LWA5500, SV4000, SA4000, S5000, SP5000 72 B7000, BW7000, BW9000, L7000, LW7000 DB7000, DBW7000,

DBW9000, DL7000,

DF7000, DLW7000,

D860, DLR8000, DFR8000.

DFW7000

205

Plates Per Cell

Truck Model 1000, 1000 Suburban, K1000, 1500, K1500, 2500, V3000, V3500, V4000, A4000, BV4000, BA4000, LV4000, LA4000, P1500, P2500. 9 B7000, BD7000, BW9000, L7000, LW7000 17 DB7000, DBW7000, DBW9000, DL7000, DF7000, DLW7000, DFW7000

Size

All gasoline engines .. 14 mm

Gap

.030 in. All gasoline engines.

Torque

All gasoline engines ...

23-27 lb-ft

VALVES

Operating Tappet Clearance

Exhaust: .020 in. 305, 351, 401 Inlet: .012 in. Exhaust: .018 in. 702 Zero

Seat Angle

Exhaust: 30 deg 305, 351, 401, 702...Inlet: 30 deg Exhaust: 45 deg 6V-71, 6-71SE 30 deg

TORQUE

Manifold Bolt

Engine

270 305, 351, 401, 702... Inlet: 20-25 lb-ft

Exhaust: 15-20 lb-ft

D860, DLR8000, DFR800		6853C	17	pt	Cooling System		
All others	11	8125	40	pt	1000-3000	33	qt
		R96	36	pt	P1500 & P2500	17	qt
Terminal Grounded		Auxiliaries:			3500	35	qt
All models	Neg	5831	4	pt	4000	40	qt
		6041	8	pt	L4000	461/2	-
		8031, 8031C, 8341A,	-	P. C	5000	381/2	-
FRONT EN	D	2A92	12	pt	L5000	45	qt
		T221 transfer case	4	pt	SPV & SPA5000	401/2	
Toe-In					B5500 & B6000 L5500 & L6000	$\frac{36\frac{1}{2}}{43}$	
Series		Rear Axle			B7000 & B9000	64	qt
Independent Front Susp	ension:	Rear Axle Model			L7000	71	qt
	.1525 in.	FH033 front, FH035			DB & DBW7000.		*
3500-5500	12525 in.	front	4	pt	DBW9000	54	qt
With Leaf Spring:		Н035	3	pt	DL & DLW7000, DF &		
K1000 & K1500. 1/1	6-3/16 in.	H055	$5\frac{1}{2}$	pt	DFW7000	$58\frac{1}{2}$	qt
	/4-5/16 in.	H075	61/2	pt	D860	39	qt
5000-9000	/8-1/4 in.	H110	14	pt	DFR8000	$57\frac{1}{2}$	qt
		H130	$16\frac{1}{2}$	-	DLR8000	51	qt
Camber (Positive)		H150, H170, H172	20	pt			
Series		H160	21	pt			
Independent Front Susp	pension:	B180, B210	22	pt	LUBRICATIO	INC	
1000-3000	0-1 deg	H220 BA185, B220	30 24	pt	LUBRICATIO	/N	
	1/4-11/4 deg	DA109, B220	24	pt	Crankcase		
With Leaf Springs:		Two-Speed:				T 66T	00"
K1000, K1500,		T130	13	pt	All gasoline engines type Heavy Duty e		
P1500 & P2500	1½ deg	T150	18	pt	for normal operati		
5000-9000	1 deg	T160	26	pt	type for severe stop		
Caster (Positive)		T170	20	pt	erations in cold		
		T172, T180, T210,	00		Above 90 deg use		
Series		TA182, T210	22	pt	From 32 to 90 deg us		
Independent Front Susp		TA185, T220, TP340	24	pt	or 30; From 10 to 8	0 deg	use
	1/2-11/2 deg	Double Reduction:			SAE 20W; From -		
3500-5500 With Leaf Springs:	2-3 deg	D220	36	pt	deg use SAE 10W;	Below	10
K1000 & K1500	11/2 deg	D290	38	pt	deg use SAE 5W.		
P1500 & P2500	2 deg	Tandem Bevel:			All diesel enginesU		
	1/2- 2 deg	BD340Front:	28	pt	type Heavy Duty		
	,,,	Rear:	32	pt	for normal operati		
		Torque Divider:	3	pt	erations in cold		
CAPACITIE	5	HD280	17	pt	Above 32 deg use		
OAI AOITIE		Torque Divider:	9	pt	Between -10 and 6		
Crankcase		HD340			SAE 20W; Below 2	-	
Engine Model		Front & Rear:	32	pt	SAE 10W.		
270	0 -4	Note: For differential		-			
with filter:	8 qt 9½ qt	lock add	2	pt	Transmission		
305		Tandem Hypoid					
with filter:	5 qt 6 qt	HD340			GMC & New ProcessI		
305B&C, 351, 401	8 qt	Front & Rear:	29	nt	purpose gear lube.		
with filter:	10 qt	HD380Front:	32 34	pt	deg use SAE 90; Be use SAE 80; Above		-
702	14 qt	Rear:	31	pt	use SAE 140.	200	ack.
with filter:	16 qt	Note: For differential	-	Po	ClarkUse straight min	neral o	rear
6V-71	20 qt	lock add	2	pt	oil. SAE 140 in sum		
6-71SE	18 qt	Tandem Double Reducti	ion		90 in winter.		
_		DD380		-4	FullerUse straight n	niner	ral
Transmission		DD500, DD340	22 28	pt	gear oil. SAE 140 in	summ	ner;
SM318	1½ pt	Note: For differential	20	þe	SAE 90 in winter;	Below	w 0
261F, 269V	12 pt				deg use SAE 80.		
	12 pt	lock add	2	pt	4.0		
433G, 434G, 540GD,		lock add	2	pt	SpicerUse SAE 50	engine	oil
	10 pt 20 pt	Tandem Worm: WD480	28	pt	4.0		

HOW TO SELECT FLEXIBLE SHAFTING FOR POWER DRIVE APPLICATIONS



11/4-inch STOW Power Drive flexible shaft with core assembly pulled out of casing.

For Power Drive applications, the following factors must be considered.

1. Torque (Lb. In.) to be transmitted. (The starting torque should be used in making selections.)

2. Operating Speeds (RPM) — If the maximum speed is higher than the rated speed, torque ratings in the fable below do not apply. To find the torque capacity for flexible shafts operating at speeds higher than the rated speeds, multiply the maximum dynamic torque capacity by the rated speed, and then divide by the operating speed. (See example.)

3. Operating Radius — In making the selection from the table below, the radius of the smallest bend in the flexible shaft should be used.

Ratings — The ratings for flexible shafts shown in the table below apply under the following conditions:

I. when the flexible shaft is adequately supported by clamps along its length. (For unsupported shafts, multiply the calculated torque by a safety factor of 1.6—see example below.)

ampie below.)

2. when the flexible shaft is operated in the windup direction, which tends to tighten the outer layer of wires. (Flexible shafts operated in the unwind direction will transmit only about 60% of the rated torque.)

3. when the flexible shaft is in continuous operation. Note: the ratings are based on temperature rise. When the operation is intermittent, the ratings in the table may be exceeded. Consult Stow engineers for specific recommendations.

			MAXIN	UM DY	NAMIC	TORQU	E CAPA	CITY (LI	B. IN.)					
RATED	STRAIGHT AND CURVED SHAFTS									1 3				
SPEED				RADIUS	OF CUI	RVATUR	E IN II	NCHES		Wgt./	Cere Dia.	Core No.		Shaft Siz
R.P.M.	50 to Strgt.	25	20	15	12	10	8	6	5	C. 11.	D10.	ana type	45	
4,500	2.4	2.2	2.0	2.0	1.92	1.9	1.7	1.5	1.25	3.0	.124/.128	2049 MH	13	
3,800	7.0	6.4	6.0	5.8	5.4	5.0	4.6	3.6	2.0	4.5	148/.152	2081 MH	15	
2,900	9.4	8.6	8.0	7.6	7.0	6.6	6.0	4.8	3.4	7.0	.185/.189	5108 MH	19	
2,500	22.0	20.0	18.8	17.6	16.0	15.0	12.6	10.8	9.0	12.5	.247/.252	8924 MH	25	
1,800	30.0	28.0	26.4	25.0	23.0	21.0	18.0	14.0		20.0	308/.313	8925 MH	31	
1,800	33.8	31.5	29.7	28.1	25.9	23.6	20.2	15.8		20.0	.308/.313	8969 T	31	
1,800	36.0	33.0	31.6	30.0	28.0	26.0	22.0	18.0	11.0	21.0	.324/.329	2034 A	31	
1,500	80.0	66.0	63.0	58.0	51.0	46.0	37.0	22.0		28.5	.368/.374	2035 A	38	
1,500	60,0	54.0	50.0	46.0	42.0	38.0	30.0	24.0		29.0	.387/.393	8970 MH	40	
1,500	90.0	81.0	75.0	69.0	63.0	57.0	45.0	36.0		29.0	.387/.393	8971 T	40	
1,150	136.0	110.0	104.0	94.0	80.0	72.0	56.0			50.5	.497/.503	8999 A	50	
1,150	148	124	110	92	72	56				53.5	.503/.511	6940 T	50	
900	248	200	176	124	84					78.5	.610/.618	6997 T	63	
900	220	204	192	180	152	130				80.5	.630/.638	7731 A	63	
750	340	224	156	76				-		117	747/.753	2056 T	75	
600	760	520	420							205	.998/1.004	2057 T	100	
440	1,500	720								343	1.298/1.304	2058 T	125	

EXAMPLE—How to use the table: The problem is to transmit ½ H P at 1700 RPM through an unsupported flexible shaft in a 25" radius, estimated starting torque 150% of normal operating torque.

- I. Cale. Torque (1b. in.) HP x 63000 - .5 x 63000 RPM = - (700) = 18.5
- 2. Correction factor for starting torque 1.5 x 18.5 = 27.75
- Correction factor for unsupported shaft 27.75 x 1.6 = 44.4 lb. in.
- Refer to Table above. Read downward in solumn under 25" radius until you find a cere having a rating of at least 44.4 lb. in. In this case we find that core No. 9870 is rated 54 lb. in. 1500 RPM. Since the given speed is 1700 RPM, suitably 54 by 1500 and divide by 1700. 54 × 1500 + 1700 and divide by 1700. 54 × 1500 + 1700 and divide by 1700. 54 × 1500 + 1700 and divide by 1700. 54 × 1500 + 1700 and divide by 1700. 54 × 1500 + 1700 and divide by 1700. 54 × 1500 + 1700 and divide by 1700. 54 × 1500 + 1700 and divide by 1700. 54 × 1500 + 1700 and divide by 1700.

For Engineering Bulletin No. 570 and a free torque calculator, write



STOW MANUFACTURING COMPANY

38 Shear Street

Binghamton, New York

GMC

Continued from Page 135

Timken...Above 20 deg use SAE 140; use SAE 90 below 20 deg.

Hydra-Matic... Use "DG" type engine oil (MIL-L-2104A). Type A automatic transmission fluid may be used, but do not mix engine oil and type A fluid.

Auxiliary...Use "DG" type SAE 50 engine oil all year.

Transfer Case...Use Multi-purpose gear lube summer and winter.

Rear Axle

Worm type...Use worm gear lubricant. Above 0 deg use SAE 140; Below 0 deg use SAE 90.

Others...Use Multi-purpose gear lube (MIL-L-2105) all year.

MODEL NUMBERS

Truck Model...On all models see plate on cab left door hinge namel.

Engine Model...Model 270 on crankcase behind distributor. 305, 351, 401 & 702—on top of the cylinder block ahead of right-bank cylinder head. 6-71SE—on front right of block. 6V-71—on right side of block near the rear end plate.

Transmission and Rear Axle... see plate inside dash compartment.



"I'll trade you a quart of milk for a quart of oil!"

ADVANCED DESIGN PISTONS

By GILLETT AND EATON for Longer Heavy Duty Service



★ Low initial cost ★ Low cost per mile

G and E

WIRE INSERTS PUT CAST IRON WEAR IN TOP RING GROOVE

G and E Wire Insert Piston before machining (left) and after ring grooves are cut (right) showing how the steel wire forms a tough wearresisting surface on both faces of top ring groove. The patented ferrous plug molded in the head (for diesel pistons) prevents burning through head and lengthens diesel piston life!

* Amazing increase in piston life

* Maintains new engine power and performance

With the thousands of G and E "Wire Insert" Pistons in use for periods up to 3 years-a phenomenal record for trouble-free operation has been established. The "Wire Insert" greatly reduces top ring groove wear and increases piston life.

The "Wire Insert" piston design-exclusive with G and E-combines all the advantages of aluminum alloy pistons with the long life of steel in the top ring groove lands. No noticeable increase in weight-unequalled for rapid heat flow-and at low cost.

A pre-shaped steel wire is cast into the piston where the top ring is located. When the grooves are machined, the closely spaced wire surfaces form hard bearing areas on top and bottom faces of the groove. Result-reduced ring land wear, longer piston life at lower cost.

as LIGHT as aluminum...wears LIKE IRON

VANASIL Pistons have repeatedly run way over 200,000 miles with only .002" to .005" wear on the top ring grooves. On-the-road ring breakdowns caused by badly worn grooves are almost eliminated because Vanasil Pistons reduce top ring groove wear up to 75%! Nothing else compares with the genuine G & E Vanasil—the original Hyper-eutectic silicon alloy, proven by 19 years of use.

You Get ALL These Advantages Only In GENUINE VANASIL PISTONS

G & E PROVED Hyer-eutectic Silicon Alluminum Alley

- 1. LIGHT WEIGHT-Same as other aluminum allays.
- 2. SCORING, SCUFFING MINIMIZED—Because of "Oil Absorbing" microscopic porous texture.
- 3. LONGER LIFE-30% less friction-30% harder. Greater "het strength"-see chart at right.
- 4, TOP RING-Breakage virtually eliminated because of reduced ring groove wear.
- 5. LOW EXPANSION-Characteristics of Cast fron.
- 6. CLOSE CLEARANCES—Fined with Cest Iron Clea
- 7. SOLID SKIRT DESIGN—No expansion devices required.

 8. HIGH HEAT CONDUCTIVITY—Similar to other aluminum alloys.
- 9. PLATING-No tin or other break-in coating required.

"OIL-ABSORBING" **PISTONS**

VANASIL

FOR GASOLINE AND DIESEL ENGINES

*Gillett & Eaton's trademark for a Hyper-eutectic silicon gluminum alloy

A COMPARISON OF TENSILE OF VARIOUS ALUMINUM ALLOYS AT ELEVATED TEMPERATURES P.S.I. 30,94 25,00 24.86 22.90 18.00 18.00 14,09 19.00 9.00 8,00 4.00 TEMPERATURE - BEGREES F.





"Our 91st Year"

GILLETT and EATON, Inc. 802 DOUGHTY STREET

802 DOUGHTY STREET

INTERNATIONAL

ENGINES

Engine	Displace-	0-1	Bore and
Model	ment (cu in.)	Cyl	Stroke (in.)
A-55	91	4	$2\frac{7}{8} \times 3\frac{1}{2}$
BD-220	220	6	3 9/16 x 3 11/16
BD-240	240	6	3 9/16 x 4 1/64
BD-264	264	6	3 11/16 x 41/8
BD-282	282	6	3 13/16 x 4½
BD-308	308	6	3 15/16 x 4½
RD-372	372.066	6	43/8 x 41/8
RD-406	405.891	6	43% x 4½
RD-450	450.990	6	43% x 5
RD-501	500.976	6	4½ x 5¼
V-266	266	8	35/8 x 3 7/32
V-304	304	8	37/8 x 3 7/32
V-345	345	8	37/8 x 3 21/32
V-401	401	V-8	4½ x 3¾
V-461	461	V-8	4½ x 4 5/16
V-549	549	V-8	4½ x 4 5/16
Cum JBS-600	401	6	4½ x 5
Cum JT-600	401	6	4½ x 5
Cum N series	743	6	51/8 x 6
Cum H series	743	6	51/8 x 6

Oil Pressure

Engine

A-55...15 psi @ idle, 50 psi @ running speed.
BD-220, BD-240, BD-264...

30-40 psi @ 1500 rpm BD-282, BD-308, RD series...

35-45 psi @ 1500 rpm V-266, V-304, V-345...

50 psi @ 4000 rpm Hot V-401, V-461, V-549...

50-55 psi @ 1500 rpm

IGNITION

Cam Angle (Dwell)

BD and RD engines 31-37 deg V-8 engines 28-32 deg

Breaker Point Gap

Engine

A-5	5	 .014	016	in.
BD	engines	 .New:	.019	in
		Reset:	.016	in.
RD	engines	 019	024	in.
V-8	engines	 .New:	.016	in.
		Rogot .	014	in

Spark Occurs

(Degrees Before Top Center)	
BD-220, BD-240, V-266	4	deg
BD-264	2	deg
	6	deg
	3	deg
A-55, V-401		deg
	7	deg
V-304, V-345		TC

SPARK PLUGS

Make & Type

BD engines...AC 45 Com, CH J-8, or AL A-7 RD engines...AC 43 Com, CH J-6, or AL A-5

Size

All engines 14 mm

Gap

A-55		.024026	in.
All 6-cyl	engines	.028033	in.
All 8-cvl	engines	.025030	in.

Torque

All engines 28-30 lb-ft

VALVES -

Operating Tappet Clearance

Engine

A-55...Inlet & Exhaust: .015 in. BD-220, BD-240, BD-264...

Inlet & Exhaust: .024-.026 in BD-282, BD-308...

Inlet & Exhaust: .018-.020 in RD-engines...

Inlet & Exhaust: .020-.022 in. V-8 engines (Hydr. lifters)..Zero

Face Angle

A-55....Inlet & Exhaust: 45 deg
BD-220, BD-240, BD-264....Inlet
and Exhaust: 30 deg
BD-282, BD-308, RD engines...
Inlet: 15 deg, Exhaust: 45 deg
V-8 engines...Inlet and Exhaust:
45 deg

TORQUE

Manifold Bolt

V-266, V-304, V-345... Inlet & Exhaust: 40-45 lb-ft

Cylinder Head Bolt

Engine

A-55 45	lb-ft
BD-282, BD-30875-85	1b-ft
Other BD-engines85-95	
RD Engines100-110	
V-8 engines 80-90	

VALVE SPRINGS

Free Length

Engine

A-55	2	1/64	in.
BD-282, BD-308	2	3/16	in.
Other BD-engines	2	11/16	in.
RD engines Inner:	2	11/32	in.
Outer:	2	9/16	in.
V-266, V-304, V-345		2.090	in.
Other V-8's Inner:	2	9/32	in.
Outer:	2	19/32	in.

Pressure

(Valve open)

Engine

BD-220, BD-240, BD-264... 149-158 lb

BD-282, BD-308 12	8-190	Ib
RD enginesInner: 8	2 88	lb
Outer: 13	9 141	116
V-266, V-304, V-345	0-141	10
197-213 lb @	410	
Other V 9'-	1.417	in.
Other V-8'sInner: 8	6- 93	10
Outer: 12	1-129	lb
CAPACITIES		
CAPACITIES		
Crankcase		
Engine		
A-55	. 4	qt
BD-220, BD-240, BD-265.	. 5	qt
(4 x 4 models)		qt
BD-282, BD-308	7	qt
RD engines	9	qt
V-266 (refill)	5	qt
V-304, V-345 (refill)	8	qt
Other V-8's	10	qt
	. 10	qu
Transmission		
T1	$2\frac{1}{2}$	pt
T2	31/2	pt
T5	6	pt
T10	5	pt
T12	5	pt
T15	7	pt
T19, T22	10	pt
T26	20	pt
T30, T31, T40, T41	12	pt
T50, T51	19	pt
T60, T61, T62, T63	24	pt
T70, T71, T72, T73	26	-
T75, T76	20	pt
With RD engines:	17	-4
With V-8 engines:	17 19	pt
with v-o engines:	19	pt
Auxiliary Transmission		
AT501	10	mé
AT510		pt
AT519, AT520		_
AT590	8	
AT539	12	pt
Rear Axle		
	0	
RA-2	2	pt
RA-1, RA-3	3	pt
RA-5, RA-10	4	pt
RA-15, RA-20	51/2	
RA-25	91/2	-
RA-30, RA-31		pt
RA-35, RA-40	11	pt
RA-44		
First production:	16	pt
Later production:		pt
RA-45	22	pt
RA-46, RA-47	311/2	pt
RA-50	21	pt
RA-56 RA-57	21	mt

RA-60	23	pt
RA-70	36	pt
RA-120	13	pt
RA-125, RA-130, RA-131	11	pt
RA-135		pt
RA-145	17	pt
RA-146		*
First production		pt
Later production		pt
RA-150		pt
RA-151, RA-152	281/2	pt
RA-155		pt
RA-156, RA-157	291/2	pt
RA-160, RA-166, RA-167		pt
RA-165		pt
RA-170		pt
RA-171, RA-172		pt
RA-175		pt
RA-240		pt
RA-245, RA-250		pt
RA-270		pt
RA-275		pt
RA-301 (tandem)		Pre
Forward		pt
Rear		pt
RA-305 (tandem)		pe
Forward		pt
Rear		pt
RA-310 (tandem)		Pr
Forward		pt
Rear		pt
RA-318 (tandem)		Pe
Forward		pt
Rear		pt
RA-315 (tandem)		Pe
Forward		pt
Rear		pt
Single Reduction Bogie		be
RA-305 (each axle)		pt
RA-310 Forwar	rd: 23	-
Rea		pt
RA-315 (each axle)		pt
RA-320 Forwar		pt
Res		pt
RA-357 (each axle)		pt
the contract of the contract o		Inc
Cooling System		

Truck	Model		
AM-80	************	$6\frac{1}{2}$	qi



"Boy . . . you people aren't kidding!"

A-100-A-130, A-120		
(4x4)	15	qt
A-140-A-160, AC-150,		
AC-160	16	qt
A-140 (4x4), A-160		
(4x4)	16	qt
A-170, A-180, AC-170,		
AC-180	19	qt
ACF-170, AC-170 (4x4),		
AC-180 (4x4)	19	qt
A-175, AC-175, ACF-175.	20	qt
ACF-180, AC-1890	20	qt
R-185, R-190, R-210	28	qt
RF-190, RF-210	28	qt
R-200, RF-200	26	qt
R-220, RF-230	30	qt
ACO series	46	qt

LUBRICATION

Crankcase

RD engines... Above 32 deg use SAE 30. Between 10 and 32 deg use SAE 20W. Below 10 deg use SAE 10W.

All other engines .. Above 32 deg use SAE 30. Between 10 and 32 deg use SAE 20W. Below 10 deg use SAE 10W.

Transmission

Standard...Above 0 deg use SAE 90 straight mineral oil. Below 0 deg use SAE 80.

Automatic Type "A" fluid Auxiliary...Above 0 deg use SAE 90 straight mineral oil. Below 0 deg use SAE 80.

Rear Axles

All models... Above 40 deg use SAE 140. Below 40 deg use SAE 90.

MODEL NUMBERS

Truck Model...On all models see plate on left side cab door inner panel.

Engine Model...On 6-cyl engines number is stamped on crankcase, right side, upper front. On 8-cyl engines it is on left bank upper front.

Rear Axle.. See specification card in vehicle.

Transmission....See specification card in vehicle.

RA-56, RA-57

INTERNATIONAL MEANS "THERE'S A MODEL TO HAUL ANY LOAD ANYWHERE!"



Bigger muscle, more dependability on any kind of job with R-Line conventional models from 50,000 to 65,000 lbs. GCW!

- Four six-cylinder engine options from 372 to 501 cu. in. size-gasoline or LPG.
- Five front axles from 5,500 lbs. to 11,000 lbs. capacity.
- Sixteen rear axles from 16,000 lbs. to 38,000 lbs. with single reduction, double reduction or 2-speed.

INTERNATIONAL TRUCKS

WORLD'S MOST COMPLETE LINE



INTERNATIONAL HARVESTER COMPANY, CHICAGO . Motor Trucks . Crawler Tractors . Construction Equipment . McCormick® Farm Equipment and Farmall® Tractors

These INTERNATIONALS give you a complete selection of all-truck power and all-truck components engineered to meet your needs exactly!

And this is typical of every model in the

COMPLETE INTERNATIONAL TRUCK LINE!





Low first cost, low upkeep cost all along the line with B-Line models from 29,000 to 48,000 lbs. GCW!

- Standard power-V-8 engines up to 345 cu. in. size.
- Three six-cylinder engine options from 264 to 308 cu. in. size—gasoline or LPG.
- Four front axles from 4,700 lbs. to 7,000 lbs. capacity.
- Sixteen rear axles from 13,500 lbs. to 18,500 lbs. with single reduction, double reduction or 2-speed.

Easier handling of longer loads, better engine accessibility with tilt-cab COE models from 50,000 to 65,000 lbs. GCW!

- Four six-cylinder engine options from 372 to 501 cu. in. size—gasoline or LPG.
- Three V-8 engines from 401 to 549 cu. in. size.
- Three front axles from 7,500 lbs. to 11,000 lbs. capacity.
- Ten rear axles from 18,500 lbs. to 23,000 lbs. with single reduction, double reduction or 2-speed.

√ Check Your Tune-Up

KENWORTH

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl	Bore & Stroke (in.)		
Cum J series	401	6	41/8 x 5		
Cum N series	743	6	51/8 x 6		
GM Diesel 6171E	425.6	6	$4\frac{1}{4} \times 5$		
H-S 590	590	6	5 x 5		

Oil Pressure

Cum J series...30-60 psi @ governed speed.

All other Cummins engines...
30-50 psi @ governed speed.

GM 6171E 30-60 psi
H-S 590... 60 psi @ 2800 rpm

IGNITION

Cam Angle (Dwell)

H-S 590 31-37 deg

Breaker Point Gap

Spark Occurs

(Degrees Before Top Center) H-S 590 5 deg

SPARK PLUGS

Make & Type

H-S 590 CH J-5 (Use CH J-6 as replacement.)

Size

H-S 590 14 mm

Gan

Torque

H-S 590 28-32 lb-ft

VALVES

Operating Tappet Clearance

Cummins engines (with oil temperature @ 140 deg).

J	series .				Inlet:	.015	in.
-					Exhaust:		
N	series				Inlet:	.014	in.
					Exhaust:	.027	in.
C	M 6171E	9	1	Fot	()	024	in

Seat Angle

H-S 590 (Cold)

Cummins engines... 30 deg GM Diesel engines.. 30 deg Hall-Scott engines.. 45 deg

Face Angle

Cummins engines... 30 deg GM Diesel engines... 30 deg Hall-Scott engines 45-451/4 deg

VALVE SPRINGS

Pressure

Cum JT... 122 lb @ 7.673 in. Cum N series... 104-114 lb @ 1 27/32 in. GM Diesels (4 valve)...

GM Diesels (4 valve)... 84½-89½ lb @ 1.416 in. H-S 590 (valve open)...

Inner: 80 lb @ 1.750 in. Outer: 116 lb @ 1.812 in.

Free Length

 Cum JT series
 2.539 in.

 Cum N series
 3.313 in.

 GM Diesels (4 valve)
 1.95 in.

 H-S 590
 Large: 3 in.

 Small: 27% in.

TORQUE

Cylinder Head Bolt

Cum J series...11/16 in. thread: 280-300 lb-ft; 3/4 in. thread: 380-400 lb-ft

All other Cum.. 430-450 lb-ft GM Diesels ...Bolt: 180-190 lb-ft Nut: 165-175 lb-ft H-S 590...58-18 thread: 140-160 lb-ft; 7/16-20 thread: 30-40 lb-ft

BATTERY

Amp-Hour Capacity

 All models
 150

 Plates Per Cell
 23

Terminal Grounded

All models Neg

SAE Group No.

All models 4

FRONT END

Toe-In

.022 in.

Timken axles	1/8	in
Wisc F-223	1/8- 1/4	in
Wisc F-3200	3/16-5/16	in.
Wisc F-7900	1/8- 1/4	in
Wisc PSW-250	0- 1/8	in
Kenworth 2-F-1.	1/8	in.
Kenworth		
3&4-F-1	1/8- 1/4	in
Page & Page		
60-FN	1/16- 1/8	in
Shuler FE-15	1/8	in
Shuler FE-18	1/8	in.

Camber (Positive)

Timken axles	1 deg
Wisc F-7900	1 deg
Other Wisc axles	0 deg
Kenworth axles	1 deg
Page & Page	
60-FN	0 deg
Shuler axles	1 deg

Caster (Positive)

Tim FE-900	3	-4	deg
Tim FG-900		11/2	deg
Wisc F-223		5	deg
Wisc F-3200		61/2	deg
Wisc F-7900		11/2	deg
Wisc PSW-250		0	deg
Kenworth 2-F-1	2	-21/2	deg
Other Kenw axles		11/2	deg
Page & Page			
60-FN	11/	2-21/2	deg
Shuler axles	2	-21/2	deg

King Pin Slant		R-100, R-140	30 pt	With GM 6171E: 65 qt
Tim FE-900	$5\frac{1}{2}$ deg	R-200, R-230(a)	36 pt	Model 853 (C)
Tim FG-900	8 deg	S-200, U-200(a)	38 pt	With Cum engines: 92 qt
Wisc F-7900	8 deg	QT-300(a)	29 pt	With H-S 590: 104 qt
Other Wisc axles	0 deg	R-300(a)	34 pt	Models 953 & 984 104 qt
Kenworth 2-F-1	0 deg	R-330(a)	44 pt	(C)-Add 10 qt to figure above
Other Kenw axles	8 deg	QT-330(a)	44 pt	for Allison hydraulic trans-
The state of the s	o deg	S-300(a), U-300(a)	39 pt	mission; Add 13 qt for Alli-
		Eaton 18803	22 pt	son unit and converter brakes.
CAPACITIES		Eaton 22501	32 pt	
		Tandems		
Crankcase		SQW, GSW-QFR2	40 pt	LUBRICATION
(Without filter)		KSW-QFR1	40 pt	
Cum JT	16 qt	SW-3456, GSW-8FR2	24 pt	Crankcase
Cum N series	28 qt	KSW-8FR1	24 pt	Cummins engines Above 90 deg
GM Diesel 6171E	26 qt	SW-3458	33 pt	use SAE 30; Between 32 and
H-S 590	14 qt	SW-456, GSW-458	28 pt	90 deg use SAE 20; Below 32
		SW-3012	17 pt	deg use SAE 10W.
Transmission		SW-3013	23 pt	Hall-Scott engines Above 90 deg
		SLHD & GSW-LHFR2(b).		use SAE 40; Between 32 and
Transmission Model No.		Front:	32½ pt	90 deg use SAE 30; Below 32
Dana (Spicer):		Rear:	32 pt	deg use SAE 20.
7851, 7855	26 pt	SQHD & GSW-QHFR2(b).		GM Diesel engines Above 32 deg
8031, 8035, 8341, 8345	12 pt	Front:	34 pt	use SAE 30; Between 0 and
8041, 8045, 8241, 8245	16 pt	Rear:	31 pt	32 deg use SAE 20W; Below 0
8051, 8055, 8251, 8255	24 pt	SFD-157	9 pt	deg use SAE 10W.
8125	28 pt	SLD, SLDD(b),		All engines Use "DG" classifica-
Fuller:		SD-472	28 pt	tion Heavy Duty engine oil.
R-95, R-950	32 pt	SFD-4600,		
R-96, R-960, R-1150	36 pt	SFDD-4600(b)	28 pt	
5-A-43	16 pt	SRD, SRDD(b)	22 pt	Transmission
5-A-62, 5-A-620, 5-C-65,		SQD, SQDD(b)	22 pt	SpicerUse SAE 50 straight
5-C-650, 5-C-72,		SFD-3020,		mineral motor oil all year.
5-C-720	24 pt	SFDD-3020(b)	31 pt	FullerUse SAE 140 straight
4-B-86, 4-A-860	17 pt	TSD-7, TSDD-7(b)	35 pt	mineral gear lubricant in
F-A-1120, 5-F-1220	25 pt	1456, SFD-460	29 pt	Summer, SAE 90 in Winter.
10-A-1120, 10-B-1120	35 pt	SD-462	32 pt	Allison Use Type C-1 hydraulic
10-F-1220 Front:	32 pt	1456A	38 pt	transmission fluid all year.
Rear:	12 pt	(a)-Add 1 pt to pinion	bearing	Twin DiscOn diesel-powered
4-MS-1440	24 pt	cage. (b)-Add 2 pt	to inter-	vehicles diesel fuel is used as
		axle differential.		converter fluid. In model DF
Hydraulics				use Type A automatic trans-
Allison:		Cooling System		mission fluid. In model CO
TC-500 & TC-600 series	40 nt			use the same oil used in the
TG-600 series	48 pt			engine.
TCB-500 series	60 pt	Models with convention	ial and	
TC-900 & TG-627 series.	64 pt	COE cabs and		
CT-5840	74 pt	Cum NT-4 &		Rear Axle
Twin Disc 11,500 series		J series:	36 qt	Worm Drive Use SAE 140
Model CO Housing:	14 pt	Other Cum engines:	43 qt	straight mineral gear lube all
Converter:		GM 6171E:	45 qt	year.
Model DF	12 pt	Models with conventional		Hypoid, Spiral-Bevel and Plane-
Clutch housing:	42 pt	cast radiator tanks (off-high-	taryUse SAE 140 SCL Hy-
Converter:		way models) and		poid gear lube all year.
CONTRACT.	12 pc	Cum NT-4 &		
Transfer Cases		J series:	51 qt	
Kenw. TC-1, 8, 9, & 10.	8 pt	Other Cum engines:	58 qt	MODEL NUMBERS
Rock-Std. (Wisc)		GM 6171E:	60 qt	MODEL NUMBERS
	o Pe	Models 848, 851, 854, (C)		m 1 35 1 2 mi 1 1
Rear Axle		With Cum engines:	52 qt	Truck ModelPlate in cab.
	00	With GM 6171E:	54 qt	Transmission ModelPlate on
H-100	20 pt	With H-S 590:	64 qt	transmission.
L-110		Model 552 (C) With Cum engines:	,	Rear Axle ModelPlate on axle housing bowl.
			63 qt	



The products are the same... the difference is the name—Delco Moraine. Now every product that comes off our family tree (formerly Moraine Products Division of General Motors) bears this new name for quality automotive parts. It's a name you can trust, too. For it's backed by almost a quarter of a century of experience in the manufacture of such dependably made products as engine bearings, sintered metal parts, brake assemblies, power brakes, brake fluid, porous metal filters and friction materials. So be sure to remember our new name. It's **DELCO MORAINE**

Delco Moraine, Division of General Motors, Dayton, Ohio



Mike Humbert, President, J. W. Humbert, Inc., Green Springs, Ohio, checks the extra tread depth of a Cooper Road-Master Extra Mile truck tire.

Cooper tires average 110,000 original miles on drive wheels for Ohio operator

J. W. Humbert, Inc. operates 20 tractors and 34 trailer units out of Green Springs, Ohio. 356 Cooper truck tires are on the road every day moving general freight and steel products throughout the state. Cooper Road-Master Extra Mile tires are used on front and trailer wheels. Cooper Traction-Treads provide extra power and tread depth for low-cost drive wheel mileage.

Mike Humbert, President, reports: "Cooper Traction-Treads alone average over 110,000 original miles per tire, plus up to 2 and 3 bonus recaps. This is more mileage than delivered by the original tread and one recap compared to another major tire brand previously used. Cooper truck tires have really cut costs for us."

Super Strong Tire Cord

A modern new million dollar electronic mill is used to super-process Cooper "Hi-T" DuPont Nylon and Tyrex* cord to new dimensions of uniformity, compactness, and lasting strength. Cooper tire cord is actually stronger than steel cable, pound for pound — protects much better against bruises, breaks, and blowouts.

Built-In Shock-Guard, Too

Every Cooper truck tire is built with Shock-Guard construction to add still more strength. This exclusive Cooper feature puts protective layers of specially resilient breaker cord and cushioning rubber directly under the tread, at the shoulders, at the sides. The combination of super-strong Cooper "Hi-T" cord and Shock-Guard construction explains why Cooper truck tires run cooler, are practically damage-proof, deliver up to 45% more original mileage, give as many as 4 and 5 bonus recaps.

Start Saving Today

Cooper truck tires consistently cost less to buy, deliver more original and bonus recap mileage to save you money. See your Cooper truck tire dealer for special prices. Or write Dept. 118 today. Cooper Tire & Rubber Company, Findlay, Ohio.



J. W. Humbert, Inc. uses Cooper Traction-Treads on the drive wheels of its 20 tractor units. Tires average 110,000 original miles, plus up to 2 and 3 bonus recaps.



OSHKOSH

ENGINES

Engine Displace- Model ment (cu in.) Cyl	Bore & Stroke (in.)
Gasoline	
IHC RD-406 406 6	4% x 4½
IHC RD-450 450 6	4% x 5
IHC RD-501 501 6	41/2 x 51/4
Con R-6513 513 6	4½ x 5%
Con R-6572 572 6	4% x 5%
Con R-6602 602 6	47/8 x 53/8
Wau 145GKB 779 6	51/4 x 6
H-S 6182-G-1 1091 6	53/4 x 7
Diesels	
Cum JT-6-B 401 6	41/8 x 5
Cum H-6-B 672 6	47/8 x 6
Cum HRF-6-B 743 6	51/8 x 6
Cum NH-220 743 6	51/8 x 6
Cum NHRS-6-B 743 6	51/8 x 6

Pressure

IHC engines...
30-40 psi @ 1500 rpm
Wau 145 GKB...
40 psi @ 2400 rpm
Con engines....... 50-60 psi
H-S 6182-G-1...

10 psi @ 350 rpm Cum engines...30-50 psi @ governed speed.

Compression Pressure

(At cranking speed)
Con engines 120 psi
Wau 145GKB 115 psi

IGNITION

Cam Angle (Dwell)

H-S 6182-G-1 27-37 deg All others 31-37 deg

Breaker Point Gap

 IHC engines
 .019-.024 in.

 Con engines
 .022 in.

 Wau 145 GKB
 .018 in.

 H-S 6182-G-1
 .021 in.

Spark Occurs

 (Degrees Before Top Center)

 IHC & Con engines 5 deg

 Wau 145GKB TC

 H-S 6182-G-1 2 deg

SPARK PLUGS

Make & Type

Com

IHC engines...AC 43 Com, CH J-6 or AL A-5 Con engines CH 8 Com Wau 145 GKB..... CH H-9 H-S 6182-G-1...Intake side: CH 10 Com; Exhaust side: CH 6

Size

IHC, Con & H-S engines 18 mm H-S 6182-G-1 14 mm

Gap

H-S 6182-G-1016 in. All others025 in.

VALVES

Operating Tappet Clearance

IHC engines...Inlet & Exhaust: .020-.022 in.

Con engines.... Inlet: .018 in.

Exhaust: .024 in.

Wau 145 GKB (cold) ...

Inlet: .013 in.

Exhaust: .030 in.

H-S 6182-G-1.....Inlet: .021 in.

Exhaust: .031 in.

VALVE SPRINGS

Free Length

Pressure

IHC engines ...Inner: 83-88 lb
Outer: 133-141 lb
Con R6513, R6602 (valve open)...
Inner: 90 lb @ 1.367 in.
Outer: 160 lb @ 1.617 in.
Con R 6572 (valve open)...
173 lb @ 1.750 in.
Wau 145GKB (valve open)...
Inner: 100 lb @ 2.063 in.
Outer: 158 lb @ 2.375 in.
H-S 6182-G-1 (valve open)...

H-S 6182-G-1 (valve open)... Inner: 110 lb @ 1.938 in. Outer: 143 lb @ 2.000 in.

Cum JT-6-B...122 lb @ 1.673 in. Cum H & HRF-6-B...

179.5-198.5 lb @ 2 3/16 in. Cum NH & NHRS-6-B...

104-114 lb @ 1 27/32 in.

BATTERY

Amp-Hour Capacity

Terminal Grounded

All models Pos

SAE Group

All models with Cummins or Hall-Scott engines 7D All others 4H

FRONT END

Toe-In

All	models			ø		*	0-1/8	in.

Caster (Positive) All models 1 deg

King Pin Slant

All models 3 deg

H-S 6182-G-1...Above 32 deg use SAE 30; Below 32 deg use SAE 20.

Wau 145 GKB...Above 70 deg use SAE 50; Between 50 and 70 deg use SAE 40; Between 30 and 50 deg use SAE 20; Below 30 deg use SAE 20W.

Cummins engines...Above 80 deg use SAE 30; Between 20 and 80 deg use SAE 20; Below 20 deg use SAE 10.

Transmission

All models... Use straight mineral oil gear lubricant. In Summer use SAE 140; in Winter use SAE 90.

Rear Axle

Single reduction.....Use Hypoid gear lubricant; SAE 140 in Summer, SAE 90 in Winter. Double reduction....Use straight mineral oil gear lubricant; SAE 140 in Summer, SAE 90 in Winter.

No. FH 20

CAPACITIES

Crankcase

IHC engines	9 qt
Con engines	10 qt
Wau 145 GKB	18 qt
H-S 6182-G-1	
Cum JT-6-B	16 qt
Other Cum engines	35 qt

Transmission

Tru	ale	34.	Lab
Iru	CK	DEG	uei

W-2	16,	W-3	1	6	9	1	W	1-	4	1	6			16	pt
All	oth	ers												24	pt

Cooling System

Truck Model

W-216, W-316, W-416,		
W-516	40	qt
W-816, 817, 826, 827,		
WA906	42	qt
W-826 (6x6)	42	qt
WA-2208, WA-2209	66	qt
WA-2206	75	qt
W-2211	80	qt
All others	54	qt

Dorman Fuel Line Assembly Kit

This new Complete Fuel Line Merchandiser and Stocking Unit will actually reduce your fuel line inventory and investment to \$40.25! With the new No. FH 20 Kit you make-up fuel lines as needed for all late model and most early model cars and trucks and eliminate the necessity of stocking assembled lines. This cabinet-type display contains 25 ft. each of 1/4", 5/16" and 3/8" I.D. special neoprene fuel line hose in dispensing-type boxes with scale markings for easy measuring. No. FH 20 also includes seventeen sizes of Brass Fuel Hose Fittings and three sizes of hose clamps in metal kit. Diagram in lid illustrates all fittings in actual size for immediate identification. Hose and fittings also available separately. Dorman packaged parts have saved mechanics' time for over 40 years! At leading wholesalers.

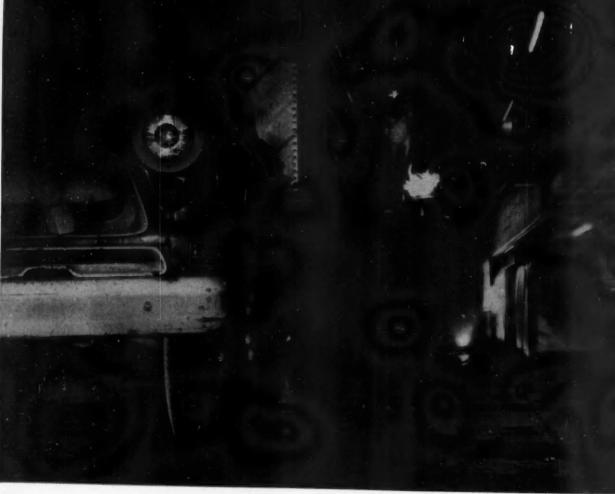
DORMAN PRODUCTS INC., CINCINNATI 27, ONIO - Los Angelos - Nov York - Taranto

LUBRICATION

Crankcase

- IHC engines...Above 32 deg use SAE 40; Between 10 and 32 deg use SAE 20W. Below 10 deg use SAE 10W.
- Con R6513...Above 32 deg use SAE 30; Between 0 and 32 deg use SAE 20; Below 0 deg use SAE 10.
- Con R6602...Above 80 deg use SAE 30; Between 20 and 80 deg use SAE 20; Below 20 deg use SAE 10.

RETIRE OLD CABLE BEFORE IT DIES IN



ACTION ... replace with dependable PACKARD cable

Prevention is cheaper than cure. That's why it's a standing order in many fleet maintenance departments: At any sign of age or weakness, replace with new Packard cable immediately.

Why Packard cable? Because Packard Electric engineers have developed special insulations that resist the oil and acids of every engine and lengthen cable life. Packard cable retains its flexibility while it resists abrasion. It's made to stand up to heat and cold, corona and age. No wonder Packard cable delivers more miles of service at less cost per mile.

Packard is the original equipment line that is used more than all other makes combined. Packaged and labeled for error-proof replacement, it's available everywhere through the United Motors System.

Steam cleaning can't harm Packard Engine Compartment Cable



This compact, highly flexible low-tension cable is designed by Packard engineers to stand up under the toughest operating conditions. It's triple insulated with a tough synthetic compound, closeknit glass braid and an outer jacket of a special Packard compound. It withstands high temperatures, diesel fuel and oil vapors-even the chemicals used in steam cleaning! It's one more reason why Packard is first choice for both original equipment and replacement.

There's a Packard Cable for every fleet need.



SUPER DUTY CABLE created for exposed conditions. Tough insulation resists weather, wear and knocks.



T.V.R.S. CABLE developed to eliminate radio-TV interference, used on more cars than any other.



"440" IGNITION CABLE designed for high-tension service. Installed on millions of vehicles.



"Live Wire" division of General Motors

√ Check Your Tune-Up

PETERBILT

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl.	Bore & Stroke (in.)
Cummins NH-220-B	743	6	51/8 x 6
Cummins NTO-6-B	743	6	51/8 x 6
Cummins NHS-6-B	743	6	51/8 x 6
Cummins NHRS-6-B	743	6	51/8 x 6
Cummins NRTO-6-B	743	6	51/8 x 6

Oil Pressure

All models...30-50 psi @ governed speed with oil temperature @ 140 deg.

VALVES

Operating Tappet Clearance

All engines (Hot). Inlet: .014 in. Exhaust: .027 in.

Seat Angle

All engines..... 30 deg

Face Angle

All engines 30 deg

VALVE SPRINGS

Free Length

All engines 3 5/16 in.

Pressure

(Valve Open) All engines...

96-114 lb @ 1 27/32 in.

TORQUE

Cylinder Head Bolt

All models 430-450 lb-ft

Manifold Bolt

All models Exhaust: 25 lb-ft

BATTERY

Amp-Hour Capacity

All models......Standard: 150 Optional: 172

Plates Per Cell

All models......Standard: 21 Optional 25

SAE Group No.

All models......With 4: 4
With 2: 6D

Terminal Grounded

All models..... Pos

FRONT END

Toe-In

All models..... $0-\frac{1}{8}$ in.

Camber (Positive)

All models..... 1 deg

Caster (Positive)

Truck Model

 281, 351......
 2-3 deg

 All COE's......
 3-4 deg

 371- 381.....
 1-2 deg

King Pin Slant

Truck Model

371, 381 8 deg All others 5½ deg

CAPACITIES

Crankcase

All models 28 qt

Transmission

Spicer:

8041, 8045, 8241, 8245.. 16 pt 8125 40 pt

8051,	8051	l-A,	805	5, 8058	5-A,	
8	251,	825	1-A,	8255,	8255-A,	

Rear Axle

Timken:		
R-140	28	pt
R-230	36	pt
R-330	35	pt
U-200	38	pt
SLHDFront:	321/2	pt
Rear:	32	pt
SQHDFront:	34	pt
Rear:	31	pt
SQD, SRD (each axle)	28	pt
SLD, SFD 4600,		
SFD 4640, (each		
axle)	28	pt
SQW	38	pt

Cooling System

(Standard models only)

Truck Model

381								48	qt
All	COE's							54	qt
All	others						,	56	qt

LUBRICATION

Crankcase

All engines......UseAPI Service "DG" type lube. Above 90 deg use SAE 30; Between 32 and 90 deg use SAE 20; Below 32 deg use SAE 10W.

Transmission

All Spicer transmissions, including auxiliaries...Use SAE 50 engine oil all year.

All Fuller transmissions.....Use straight mineral gear lubricant. Above 50 deg use SAE 140; Between 0 and 50 deg use SAE 90; Below 0 deg use SAE 80.

Rear Axle

Model SQW.....Use Heavy Duty worm gear lubricant. Above 0 deg use SAE 140; Between 0 deg and —10 deg use SAE

All others......Use Multipurpose gear lubricant. Above 0 deg use SAE 140; Between 0 deg and —10 deg use SAE 90.



That's all it costs to make your driver happier with his cab. To help him drive farther with less fatigue. To get him where he's going, with greater comfort. Because that's all it costs to protect his eyes from glare with a windshield of E-Z-EYE Safety Plate Glass. Ask for this option when you buy trucks, for your driver's sake (and your own).

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Reduces Glare, Eyestrain, Sun Heat

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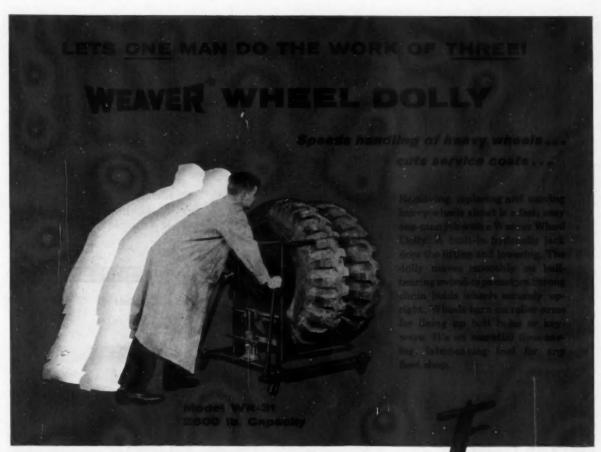
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Model WA-75

See your jobber or write for Bulletins

SEE THE DISPLAY OF WEAVER 50th ANNIVERSARY GOLD FINISHED JACKS AT YOUR JOBBER'S

This husky Weaver 10-Ton Capacity Jack teams up with the Wheel Dolly to speed truck servicing. A giant for performance, it lifts the heavy jobs in the fleet. (Also available in 20-ton capacity). Quick Lift Lever, pioneered by Weaver, permits operator to spot the saddle and raise it quickly to load position. Load is easily raised by operating long balanced handle. The long, low frame goes under the lowest axles. Easily maneuverable like all Weaver jacks. Extra high lift to 24".

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WEAVER

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Complete Weaver line includes: Twin Post* Lifts * Triple Post Lifts * Frame Type, Roll-On and Free-Wheel
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Testers * Brake Testers * Wheel Balancing Equipment * Jacks * Wheel Dollies * and Air Compressors
(*Registered Trademarks)

√ Check Your Tune-Up

REO

ENGINES

Engine	Displace-		Bore &		
Model	nent (cu in.)	Cyl	Stroke	(in.)	
OA-110 (OA-255),					
OA-100 LPG (OA-255 LPG)	255	6	35/8 x	41/8	
OA-130 (OA-292)	292	6	37/8 x	41/8	
OA-145 (OA-331),					
OA-142 LPG (OA-331 LPG)	331	6	41/8 X	41/8	
OH-170, OH-160 LPG	331	6	41/8 X	41/8	
OH-185	362	6	41/4 X	41/4	
OV-207	390	8	37/8 x	41/8	
OV-235, OV-220 LPG	440	8	41/8 X	41/8	

Oil Pressure

All 6-cyl engines...35 psi @ 2000 rpm Minimum; 40-60 psi @ top speed Maximum.

All 8-cyl engines...35-40 psi @ 2000 rpm Minimum; 45-60 psi @ top speed Maximum.

Compression Pressure

At cranking speed, about 150 rpm, with wide open throttle and all spark plugs out.

OA110

OAIIO,	
OA-100 LPG.	115-135 psi
OA-130, OA-145	110-130 psi
OH-160 LPG	110-130 ps
OV-220 LPG	160-180 psi
Other engines	130-150 ps

IGNITION

Cam Angle (Dwell)

OA-110, OA-130,		
OA-145	31-37	deg
OH-160 LPG	31-37	deg
OA-100 LPG,		
OA-142 LPG	38-45	deg
OH-170, OH-185	38-45	deg
OV-series	26-33	deg

Breaker Point Gap

OA-110,		
OA-130, OA-145	.022	in
OH-160 LPG	.022	in
Other engines	.016	in

Spark Occurs

(Degrees Before Top Center)

Note: (a) Setting given @ 450 rpm idle speed for fuel rated at 75 octane minimum or above. (b) Setting given @ 450 rpm idle speed for fuel rated at 50 per cent propane minimum with 8 per cent propylene or butylene maximum.

OA-130(a)	4	deg
OA-145(a), OH-170(a).	2	deg
OA-100 LPG(b),		
OA-142 LPG(b)	6	deg
OH-160 LPG(b)	8	deg
OH-185(a) @ 500 rpm.	6	deg
OV-207 (@ 500 rpm)		
Maximum:	3	deg
Minimum:	0	deg
OV-235 (@ 500 rpm)		
Maximum:	6	deg
OV-220 LPG(b) @		

OA-110(a) 8 deg

SPARK PLUGS

500 rpm

6 deg

Make & Type

			L		_								
OA-110,	()	A	-	1	0	0	L	I	0	G	CH	J-7
OH-185										*		CH	J-4
OV-serie	S						*		*			CH	H-8
Other en	ng	ŗi	n	e	8		*					CH	J-6

2124	•							
All	engines		*				14	mm

OV-220 LPG	.025	in.
Other LPG engines	.020	in.
All gasoline engines	.025	in.

Torque

All engines 25	5-30	lb-ft
----------------	------	-------

VALVES

Operating Tappet Clearance

OA-series (Hot)	.015	in.
Other engines (Cold)	.023	in.

TORQUE

Manifold Bolt

All	engines	 35-	40	lb-ft

Cylinder Head Bolt

All engines	100-105	1h #

VALVE SPRINGS

Free Length

OA-110, OA-130,		
OA-145		
Inlet & Exhaust:	2.1406	in.
OA-100 LPG,		
OA-142 LPG		

	Inlet:	2.1406	ın.
	Exhaust:	1.816	in.
400			

OH-170... Inlet & Exhaust: 2.1406 in. Other OH-series ...

OCTION OVE	DOLLOG		
	Inlet:	2.1406	in.
	Exhaust:	1.816	in.
OV-series	Inlet:	2.1406	in.

Exhaust: 1.816 in.

Pressure

(Val	A	1
1 V 9 11	U (A) (E)	neni
/ A COT.	100	Decre 1

OA-110, OA-130	, OA-145,	OH-170
Inlet &	Exhaust:	178-188
lb @ 1.360	in.	

All others ...

-	Inlet:	178-188	lb	@	1.360	in.
	Exhau	st:				
		184 100	91.	0	1 100	

174-192 lb @ 1.163 in.

(Valve Closed)

	-			
OA-110, OA-	130), OA-145,	OH-1	70
Inlet	&	Exhaust:	64-70	lb
@ 1.780	in.			

All others	King Pin Slant	QT-240, R-300 34 pt
Inlet: 64-70 lb @ 1.780 in.	Axle Model No.	QT-340 32 pt
Exhaust:	Timken:	RT-240, RT-340 32 pt
63.5-70.5 lb @ 1.583 in.		R-140 28 pt
	27462 3 deg 30000, 31104, 32500 3 deg	R-200 36 pt
	F-233, F-2090 0 deg	U-200 38 pt
BATTERY	All others 5½ deg	U-300 39 pt
Amp-Hour Capacity	Shuler:	Eaton:
	FD-901, FE-900 $5\frac{1}{2}$ deg All others 0 deg	1911, 18800, 19500 24 pt
N. Y. school bus	All others 0 deg	2011, 16600, 20500 20 pt
Other diesel models 150		17800, 18800 22 pt
All other models 70		13600 13 pt
	CAPACITIES	
Plates Per Cell		Tandems
N. Y. school bus 11	Crankcase	SFHDFront: 17 pt
BCL-diesel series 21	OA-, OH-series	Rear: 16½ pt
Other diesel models 19	(No filter): 8 qt	SLHDFront: 32½ pt
All other models 13	With filter: 9 qt	Rear: 32 pt
	OV-series (No filter): 8 qt	SQHDFront: 34 pt
Terminal Grounded	With filter: 10 qt	Rear: 31 pt
All models Neg		(Following are for each axle) SLD, SLDD 28 pt
***************************************	Tananiasia-	SLD, SLDD 28 pt SQD, SQDD 22 pt
	Transmission	22M. Front & Rear: 12 pt
FRONT END	Warner T98A 8 pt	Power Divider: 9 pt
	Clark 205V, 205VO 9 pt	28M Front & Rear: 17 pt
Toe-In	Clark 250, 251VO 9 pt	Power Divider: 9 pt
Axle Model No.	Clark 300V, 300VO, 305V	32MFront: 28 pt
Timken:	305V	Rear: 31 pt
27462 1/16-1/8 in.	Spicer 3152 10 pt	Power Divider: 3 pt
F-233 3/16-5/16 in.	Spicer 6352, 6452, 6453. 17 pt	42M
F-2090 1/16-3/16 in.	Spicer 8041, 8045 16 pt	Rear hole (f. & r.) 20 pt
Others $\dots 0^{-1/8}$ in.	Spicer 8125 28 pt	Front hole (f. & r.): 2 pt
Shuler:	Spicer 8251, 8255 24 pt	Power Divider: 6 pt
FE-11 1/16-3/16 in.	Fuller R35 16 pt	56MFront & Rear: 24 pt 34D-,38D series 24 pt
FE-15½ in.	Fuller R46	34R-,38R series 22 pt
FD-901, FE-900 $0-\frac{1}{8}$ in.	Fuller R63, R630D 30 pt	Front drive axles 12 pt
	Fuller R96, R960 33 pt	Trong drive distriction and pe
Camber (Positive)	Fuller 5A65, 5A650 24 pt	
Axle Model No.	Fuller 10P1120 24 pt	Cooling System
	Fuller 10B1120 35 pt Reomatic MT30, MT40	Truck Model
Tim F-233 & F-2090 0 deg All others 1 deg	(dry capacity) 38 pt	
1 deg		A-375, A-475 24 qt Other A- models 37½ qt
	Auxiliary	AC-403 33 qt
Caster (Positive)	Spicer 7231, 6041 8 pt	AC-503 31 qt
Axle Model No.	Spicer 8031, 8035, 8341. 12 pt	AC-603, AC-633,
Timken:	Spicer 8345 12 pt	AC-703 37½ qt
27462 3 deg	Transfer Case	BCL series 54 qt
30000, 31104, 32500 2 deg	Timken T-77 5 pt	C-378, C-478, C-578 30 qt
FD-900, FD-901,	P.	C-370 24 qt
FE-900 (on Reo		C-330, C-400, C-430,
F & C series) 1½ deg	Rear Axle	C-440, C-442-OH,
FE-900 (on A-375,	Axle Model No.	C-500, C-510, C-530,
A-475) 3 deg FD-900, FD-901,	Timken:	(with OH-185
FE-900 (on other		engine) 31½ qt Other C models22½ qt
	F-140	D-303 22½ qt
74	H-140 18 nt	
F-233, F-2090 5-7 deg Shuler:	H-140 18 pt H-240, H-340 22 pt	D-403, D-503 31½ qt D-478, D-678 34½ qt
F-233, F-2090 5-7 deg	H-140	D-478, D-678 34½ qt All E-models 36 qt

√ Check Your Tune-Up

STUDEBAKER

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl	Bore & Stroke (in.)
1E	169.6	6	3 x 4
3E	259.2	V-8	3 9/16 x 31/4
4E	245.6	6	3 5/16 x 43/4
5E	289	V-8	3 9/16 x 35/8
6E	289	V-8	3 9/16 x 33/8

Oil Pressure

All engines...40 psi @ 1400-1600 rpm with oil @ 150 deg

Compression Pressure

All engines...Standard: 130-150 psi @ 150 rpm; Optional: 120-140 psi @ 150 rpm.

IGNITION

Cam Angle (Dwell)

Engine

1E	*************	37-41	deg
	5E, 6E	28-32	deg
4E		31-37	dea

Breaker Point Gap

Engine

1E										. *				ú			.020	in.
4E																	.022	in.
3E,																	.016	in.
(Al	WE	LV	rg	12	9	e	-	d	w	e	1	1	n	n	p.	ter)		

Spark Occurs

(De	grees	Before Top Center))	
All	6-cyl	engines	2	deg
All	8-cyl	engines	4	deg

SPARK PLUGS

Make & Type

		engines	CH	J-7
All	8-cyl	engines	CH	H-10

Size

-	A mn	1.4	engines	All angi	A
ė	A 222.2	14	engines	All engi	A

Gap

All	6-cyl	engines.	.028033	in.
All	8-cyl	engines.	.033038	in.

Torque

All	engines		26-30	lb-ft
-----	---------	--	-------	-------

VALVES

Operating Tappet Clearance

All 6-cyl engines			
Inlet & Exhaust:		in.	Cold
All 8-cyl engines			
Inlet & Exhaus	t:		
.02	3025	in	. Ho

Seat Angle

All en	gines													4	5	de	eg	į
--------	-------	--	--	--	--	--	--	--	--	--	--	--	--	---	---	----	----	---

Face Angle

All	engines						45	deg

TORQUE

Manifold Bolt

All	engine	s			
	Inlet	&	Exhaust:	26-30	lb-ft

Cylinder Head Bolt

Engine

3E,	5	E	4,	-	6	Э						55-65	lb-ft
4E												80-85	lb-ft
1E										*		46-50	lb-ft

VALVE SPRINGS

Pressure

(Valve Open)

Engine

6E...

1E 93-103 lb @ 1 5/16 in.
4E Std: 125-135 lb @ 13/4 in.
H. D. Exh.: 120-130 lb @ 1½ in.
3E, 5E
Inlet: 105-115 lb @ 1 43/64 in.
Exhaust-Std: 105-115 lb @
1 43/64 in.; H. D.: 106-116 lb
@ 1 11/32 in.

Inlet: 105-115 lb @ 1 43/64 in. Exhaust: 106-116 lb @ 1 11/32 in.

BATTERY

Amp-Hour Capacity

Truck Model

5E	series					.Standard:	50
						Optional:	70

Plates Per Cell

			-	 -							
1	A 11	mode	la.					ı	Ŀ		9

Terminal Grounded

11	models									Neg
11.	models		0.			*				Nek

FRONT END

Toe-In

All models	 1/16-1/8	in.

Camber

All models 1/16-1/8

Caster

(Loaded)

Truck Model

5E5 to	o 5E12					*		4	deg
5E13,	5E14						*	31/2	deg
5F16	to SEA	10			С			31/4	deg

King Pin Slant

Truck Models

5E5,	5E6, 5E7		 	71/2	deg
5E11	to 5E28		 	8	deg
5E40			 	9	deg

CAPACITIES

Crankcase

Truck Model

5E6,	5E11,	8	5]	0	1	4	,	5	0	1	6		6	qt
All	others		•		0								5	qt

Transmission

Morra	Dungana	490	6	E	nt

Warner	T90B	*******	2.5 pt
	Opt	O'drive	3.4 pt
Warner	T89C		3.0 pt
	Opt	O'drive	3.9 pt
Warner	T98A		8.0 pt

Rear Axle

Spicer 2211	3 pt
Spicer 60	5½ pt
Tim B-100-N-X-3	91/2 pt
Tim E-102-N-X-2	181/2 pt
Tim E-302-N-X-7	14 pt
Tim F-146-N-X-1	16 pt
Tim H-140-N-X-9	18 pt
Tim G-346-N-X-6	24 pt
Tim H-340-N-X-12	23 pt

Cooling System

5E5	11	qt
5E6, 5E6D, 5E11,		
5E11D	131/2	qt
5E14, 5E14D, 5E16		
Standard:	16	qt
H. D. Rad:	161/2	qt
5E13, 5E13D, 5E28		
Standard:	203/4	qt
H. D. Rad.:	211/4	qt
5E7, 5E7D, 5E12,		
5E12D	17	qt

LUBRICATION

Crankcase

All engines...Use MS type engine oil alone or with MM, ML or DG. Do not use DS type. Above 32 deg use SAE 30; from 10 to 32 deg use SAE 20W; From -10 to 10 deg use SAE 10W. Below -10 deg use SAE 5W.

Transmission

3-speed...Use SAE 90 regular type gear lubricant all year.

3-speed with Overdrive....Use
SAE 90 regular mineral oil
gear lubricant all year.
Note: Do not use lubricants
with Extreme Pressure ingredients.

4- and 5-speed... Use regular gear lubricant. Above 32 deg use SAE 140; Below 32 deg use SAE 90.

Automatic... Use Type A (AQ-ATF) automatic transmission fluid all year.

Rear Axle

Spicer axles...Use SAE 90 hypoid lubricant all year. For models with Twin-Traction differential use SAE 90 high grade hypoid lubricant with sulphur-chlorine-lead base.

Truck models of one-ton and up
...Use SAE 90 hypoid gear
lubricant. Above 32 deg use
SAE 140; Below 32 deg use
SAE 90.

MODEL NUMBERS

Truck Model...See plate on left door post on ½- and ¾-ton models. See plate on left side seat riser on other models.

Engine Model . . . Engine number on 6-cyl engines is stamped on machined pad at upper left front of block. On V-8 models the number is on a machined pad adjacent to the oil filler tube.



MEET THESE FRANCHISED

GUNITE

GOLD BOND DISTRIBUTORS



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Here is the finest network of qualified service and supply organizations in the industry. We are proud to be associated with them . . . we have every confidence in their ability to meet your requirements for Gunite brake drums and Gunite steel wheels. Check with your Gunite



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Paterson-Auto Equipment, Inc.

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Canton-Service Truck Parts Co. Cincinnati—Truck Trailer Supply Cleveland—Power Brake Service, Inc. Toledo-Wheel & Rim Sales Co.

OKLAHOMA

Oklahoma City-Southwest Wheel, Inc.

OREGON

Portland-Thompson & Dubey, Inc.

PENNSYLVANIA

Allentown-Allentown Brake & Wheel Service

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SOUTH CAROLINA

Charleston—Southern Welding Works Greenville—Cato Trailer Service Co.

TENNESSEE

Chattanooga-Power Brake & Supply Co. Johnson City-Range Auto Parts Memphis-Haygood Brake Service Nashville-Safety Service Company

TEXAS

Dallas-Southwest Wheel, Inc. Houston-Southwest Wheel, Inc. Lubbock-Southwest Wheel, Inc. San Antonio-Southwest Wheel, Inc.

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WISCONSIN

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GUNITE FOUNDRIES CORPORATION • ROCKFORD, ILLINOIS



New GMC Conventionals meet all fleet needs from ½-ton pickups to 45,000 lbs. GCW tractors.



See how these most advanced trucks in 20 years can do the same for you. Pull here

CONVENTIONALS

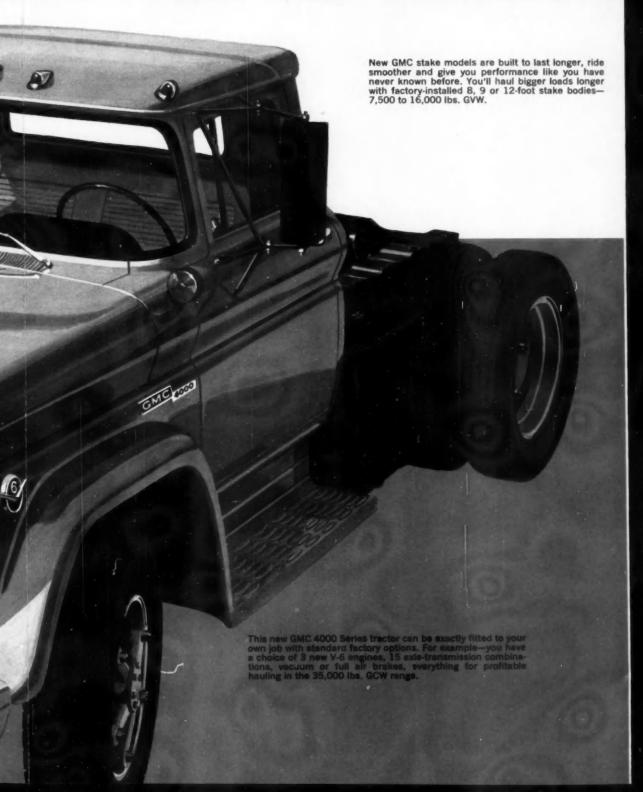


TODAY — SEE POWER! PRO

New GMC Conventionals meet all fleet needs from ½-ton pickups to 45,000 lbs. GCW tractors.



E THE PRACTICAL STYLING! OFIT FROM THE UNSURPASS



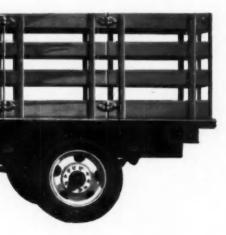
TRY THE SUPERIOR DURABILITY!



Here are the new distinguished GMC Conventionals . . . the trucks that are smashing sales records. A extra value and uncompromising ruggedness you get. handling, smoother-riding trucks. Road-tried, test-prolasting, low-cost performance. And scores of other advangladly give you all the facts. Contact him today. He's lis



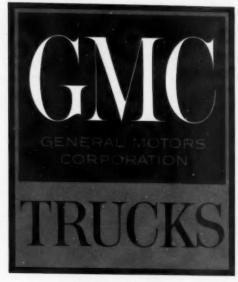
IOR



als with bold, functional styling. And no wonder, look at the get. Bigger, stronger cabs. Easier-proved exclusive V-6 power for dvantages. Your GMC Dealer will s listed in the Yellow Pages.



New bonus-load GMC Jr. Van has the largest cargo area in its class with 243 cu. ft. 90" long, 67%" wide and 67%" high. All-steel, unitized construction provides more strength and longer life with less weight than conventional design. GVW—5,500 lbs. Engine—130 hp. Six. Sold and completely serviced by more than 3000 GMC Dealers coast to coast.



From ½-ton to 60-ton . . . General Motors leads the way!

From Operation "High Gear" come the BIG GMC BREAKTHROUGHS in engine, chassis and cab engineering that drastically cut your trucking costs!

- New, exclusive power! GMC V-6 engines with exceptionally long life!
- New GMC frames—up to 35% stronger, designed to last years longer!
- Shorter turns and more comfortable driving, improved steering!
- Smoother riding, easier handling with new independent front suspension and frictionfree torsion bar springs!
- New coil and vari-rate rear springs for better cushioning and longer life!
- Practically styled, more comfortable and roomier cabs!



There is extra stamina, extra value built into every one of the 34 GMC pickup combinations, including the "go anywhere" 4-wheel-drive models. See them, drive them today.

HERE ARE THE GREATEST

EXCLUSIVE V-6 POWER GIVES YOU LOWER-COST, LONGER-LASTING PERFORMANCE!

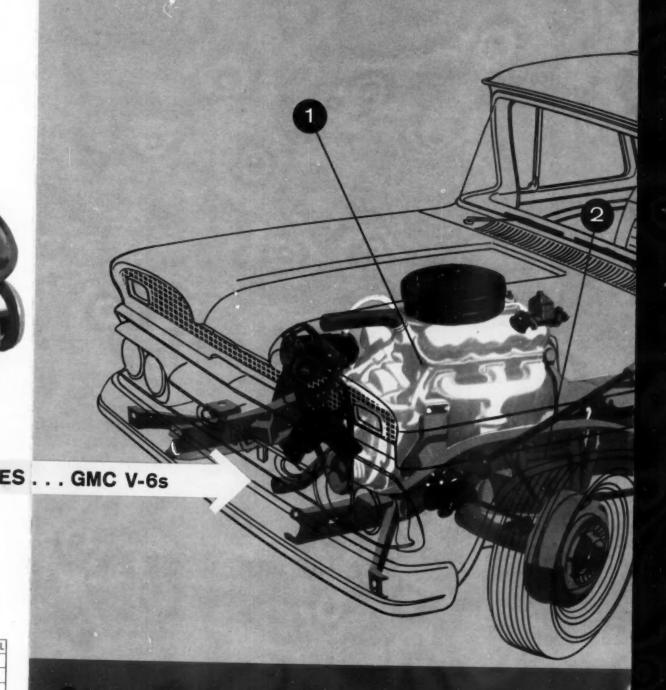


Heavier, stronger pistons, rods and crankshaft; larger bearings—GMC-built aluminum pistons (A) have cast-in steel expansion control rings to permit a precision fit, low cost operation. Short, high strength rods (B) are extra sturdy and more rugged. GMC's short, husky crankshafts (C) are up to twice as heavy as V-8s of comparable horsepower . . . resist deflection under heavy loads for greatest durability. M-400 bearings (D) are the toughest, longest lasting you can get. See your GMC Dealer for visual comparison proof.



Model	Gross Torque Range	Max. Horsepower				
305A	258-260 @ 1400-2200	150 @ 3600				
305B	264-266 @ 1100-2000	150 @ 3600				
305C	268-270 @ 1200-2100	165 @ 3800				
351	308-312 @ 1400-2400	180 @ 3400				
401	375-377 @ 1200-2000	205 @ 3200				

T COST-BUSTING ADVANCES

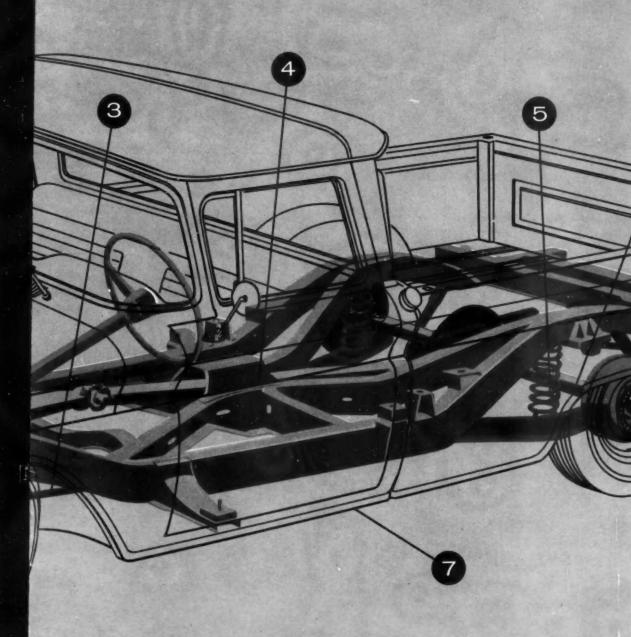


New rugged V.6 engines produce full power over a broad range at low rpm to give you higher performance at lower rose.

2) smoother riding, sailer meering and yours with CMCs new independent front suspension; no extra out on lighter-duty models!

3 New torsion has springs an maintenance tree and friction to tree with a variable deflection to book up all road shocks.

IN 20 YEARS . . . ALL YOU

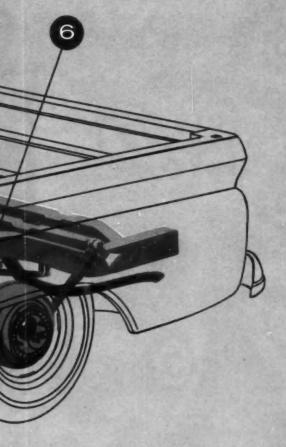


New GMC frames are extremely rigid . up to 85 % snonger Less hame flexing increases cab and truck life.

5 Coil near springs give you a smoother, quieter, pantrogrecar title-loaded or empty. Standard on V5 and 44-ton models.

6 Ande the strength, lastice the greater strength, lastice the grade was the strength of the s

RS ONLY FROM GMC!



SMARTER, ROOMIER, STRONGER CABS! COMPLETELY NEW OUTSIDE AND IN!



See the cadet peaks, accented chrome trim and optional full-width rear window. Notice the sculptured sides. This new GMC cab is handsome and stronger... protected by the new 777 Super Enamel that keeps its luster years longer than previous finishes.



This year deluxe quality is standard in GMC cabs. You get all these extra value features at no extra cost: foam rubber seats, easily-removed instrument clusters for convenient servicing, steel-framed door windows to prevent chipping, rust inhibitor between door panels, and extra room everywhere.

GMC Truck & Coach a General Motors Division—Pontiac, Michigan

Fleet every repor AR CO DO. WI. GM

CONV

ets rywhere ort

PADS
RE UP!
DSTS ARE
DWN
ITH NEW
MC
RUCKS!

e why! Pull here

NVENTIONAL IETY-INCHERS



YOU, TOO, CONTRACTOR WITH NEW

GMC builds the first and only complete line of conventional-type 90inch BBC trucks-19,500 lbs. GVW to 120,000 lbs. GCW.

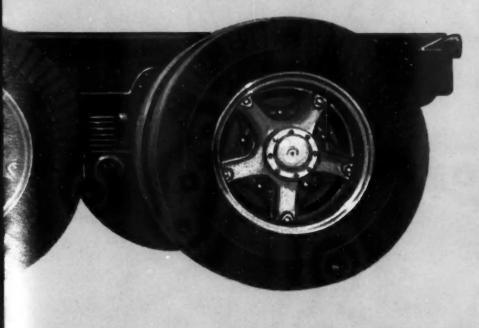


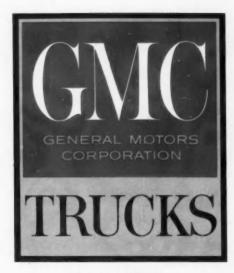
CAN HAUL BIGGER LOADS FA



STER, HAUL THEM LONG Y-INCHERS



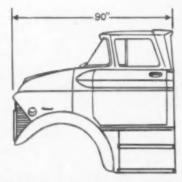




From ½-ton to 60-ton . . . General Motors leads the way!

From Operation "High Gear" come the BIG GMC BREAKTHROUGHS in engine, chassis and cab engineering that are drastically cutting trucking costs everywhere.

- Exceptional long life! Top power at lower rpm for lasting, low-cost performance! New, exclusive V-6 and Twin-Six design!
- Longer brake life and surer stops with bigger brakes!
- Easier handling, smoother riding with new independent front suspension and torsion bar springs!
- Haul big payloads dependably with frames up to 35% stronger than previous frames!
- Better cushioning, empty and loaded, with new, tough, 3-inch vari-rate rear springs!
- Extra comfort and safety throughout with new, roomier, more rugged cabs!



New GMC Conventional Ninety-Inchers have proved to be the most adaptable for legal payloads at lower costs—haul 40-foot trailers within 50-foot over-all length. Greater front axle loading gives more ideal weight distribution.

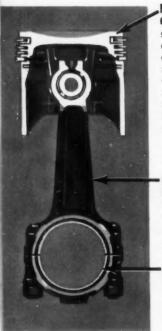
RUGGED AND DEPENDABLE,

Fleets favor new V-6s with UP TO 200,000 MILES POTENTIAL!

More and more fleets are switching to new GMC V-6 power. Here's why—these exclusive, rugged engines produce full, usable torque at low, life-saving speeds . . . cut wear and increase fuel economy. Accurately controlled dynamometer and road tests indicate these advanced engines have a life potential of up to 200,000 miles of continuous operation without a major overhaul . . . with the proper maintenance and application.

HERE'S YOU	R COMPLETE CHOICE OF NE	W GMC GAS ENGINES
Model	Gross Torque Range	Max. Horsepower
305A	258-260 @ 1400-2200	150 @ 3600
305B	264-266 @ 1100-2000	150 @ 3600
305C	268-270 @ 1200-2100	165 @ 3800
351	308-312 @ 1400-2400	180 ⊜ 3400
401	375-377 @ 1200-2000	205 @ 3200





Pistons are exclusively GMC designed and built for best sealing and longest life. Special casting with the head down assures more strength at the top where it's needed. 4-ring pistons have cast-in steel band to control expansion. All pistons are extraheavy-duty design, yet every one is precision balanced to 1.8 grams for vibration-free performance, measured to .0003 inches for a perfect fit.

• Massive, high-strength GMC connecting rods are drop forged, heat treated carbon steel. Every one is precisely balanced to less than 2 grams tolerance for smooth, lasting operation.

New, big-diameter GMC bearings. Moraine M400 bearing materials will take the heaviest loads under the most extreme operating conditions.



Short, stiff crankshaft! New GMC crankshafts have big journal overlaps, large precision ground fillets, tough, Tocco-hardened journals (351, 401 and Twin-Six engines) — everything for high strength, unsurpassed rigidity and long life.

Up to 3 times more water volume than comparable engines and increased cooling area for longer engine life! Notice the extra-wide water passages (A) completely surrounding each cylinder. See the wide spaced valves (B) . . . the big cooling area (C) for rapid heat dissipation. New high-volume water circulation (D), up to 200 gallons per minute, assures less than 4 degrees temperature variation throughout. These are proof of efficiently cooled engines with every feature to eliminate life-killing "hot spots".

, MOST ADVANCED TRUCK POWER

MOST PULLING POWER YOU CAN GET!

Exclusive GMC Twin-Six engines are giving truck owners the greatest load-moving power of any standard gas engine. This is lasting power, too. Maximum governed engine speed is only 2400 rpm. Low-stress, easystroking speed greatly extends engine life as well as reduces operating costs.

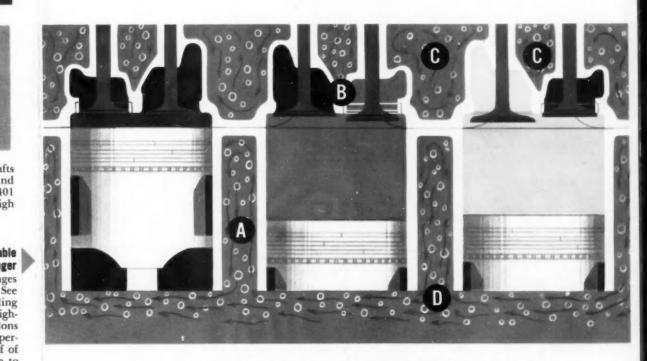


NEW TWIN-SIX FOR PROFIT-PERFORMANCE ON ALL HEAVY HAULS			
Model	Gross Torque Range	Max. Horsepower	
702	625-630 @ 1400-2100	275 @ 2400	

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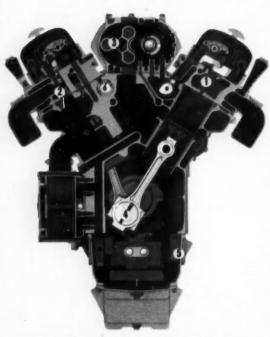


SEE YOUR GMC DEALER FOR ACTUAL, VISUAL PROOF OF GMC'S ENGINE SUPERIORITY.

IN 20 YEARS!

MORE POWER PER DOLLAR! MORE POWER PER CUBIC INCH!

With GMC's new V-6 diesels, you get loadmoving power on *every* downstroke. This smoother, more responsive power permits you to meet faster schedules. Greatly reduced weight and space also add to the ever-increasing popularity of these reliable power plants.



- 1 Simple, more dependable fuel system.
- 2 Four exhaust valves per cylinder (not 1 or 2) for freer breathing and complete scavenging of gases.
- 3 Powerful blower forces out burned gases, fills cylinder with fresh air . . . reduces heat for added engine life.
- 4 Short, rigid crankshaft has generous bearing journal overlap to increase torsional stiffness.
- 5 Deep-skirted block and crankcase with reserve strength assures greater bearing support.

Model	Max. Torque	Max. Horsepower
6V-71	577 @ 1200	189 @ 1800 210 @ 2100*

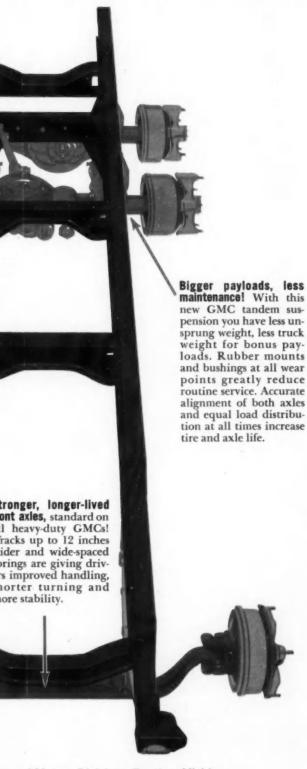
^{*}No extra cost

HERE ARE THE SMOOTHER



GMC Truck & Coach-a Genera

E NEW STANDARDS FOR EASIER DRIVING, R RIDING AND GREATER DURABILITY!

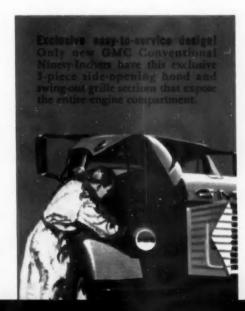




Longer spring life, greater load protection! New super-cushioning, vari-rate springs are standard this year. You pay nothing extra for the built-in radius-rod leaf . . . nothing extra for the unique cam action that automatically adjusts the spring to the load for a smoother ride, empty or loaded. Have your GMC Dealer give you all the facts.



New ride and handling advances! Now each front wheel absorbs shocks independently . . . easier on the driver, truck and load. Another GMC advance — maintenance-free, friction-free torsion bar springs are standard with independent front suspension.



eneral Motors Division—Pontiac, Michigan

ME KN TR CO BU GM GR TO PR

All

TILT

EN WHO WON RUCK OSTS ARE **JYING** MCs FOR REATER DN-MILE ROFITS!

All the reasons are inside—just pull

T-CABS



For 1960—a complete new line of steel and aluminum tilt-cabs for every load, road and law . . . built only by GMC!

Right now, fleets everywhere are hauling up to 2000 pounds extra payload every trip with the new, exclusive 48-inch GMC aluminum tilt-cabs. You can do the same. New 7000 and 8000 Models are built with 28-inch or 50-inch front axle setting to exactly meet your specific legal and weight requirements. Proved 189 or 210 hp. 71 Series diesels meet your requirements for every haul. Four and six wheelers from 29,000 GVW to 76,000 lbs. GCW.





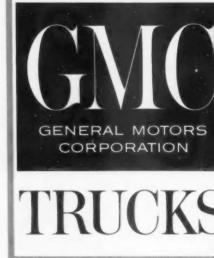
BIGO LON ENG

It's easy to see the extended if right out in the open. This new 3 steel tilt-cab also features an extended tilt-cab also features an extended tilt-cab also features and extended tilt-cab also features are the trucks that are extended to service . . . easier on your page 1

SEE YOUR GMC DEAL

ER PAYLOADS! EASIER SEF GER-LASTING, HIGHER-PERF INES!...all yours with NEW G

Join the fleets that are profiting from the many advanced features of the new GMC steel tilt-cabs. BBC is only 72-inches and axle set-back 52-inches—the preferred dimensions to haul more weight, more volume . . . more profitable payloads. You also get superior performance, extremely short turning and big safety vision. Choice of V-6, Twin-Six gas power or V-6 diesels in models from 19,500 lbs. GVW to 76,000 lbs. GCW.



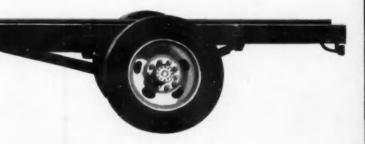


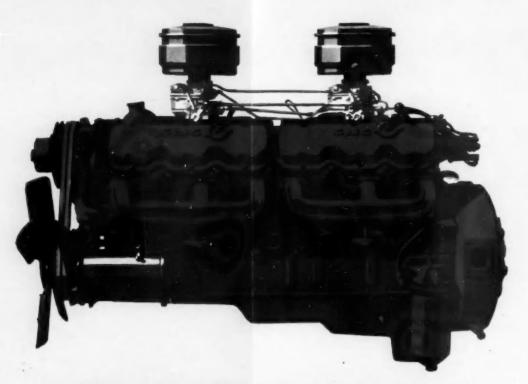
TODAY FOR A CONVINCING DEMONSTRATION. HE'S LISTED IN THE YELLOW PAGES.

RVICING! FORMANCE GMC TILT-CABS

From Operation "High Gear" come the BIG GMC BREAKTHROUGHS in engine, chassis and cab engineering that are drastically cutting trucking costs in fleets across the nation.

- Lower-cost, longer-lasting performance with exclusive, V-6 and Twin-Six engines!
- Greater truck, driver and load protection from damaging bumps and jolts – easier driving with new independent front suspension and torsion bar springs!
- Longer spring life with shock-absorbing 3-inch wide vari-rate rear springs!
- All new design frames! Stronger! More rigid! Lighter weight!
- Easier, quicker servicing with new, full-tilt cabs that completely expose the engine!
- Perfect control alignment with stationary control island for trouble-free operation!





HIGHEST PERFORMANCE OF ANY STANDARD GAS

ENGINE! NEW GMC TWIN-SIX—Now you can maintain tight schedules with higher average road speeds! With this exclusive 702 cubic inch engine, you get great reserve power at low engine speed to haul loads at part throttle under normal conditions . . . using reserve only for hills. You save fuel, reduce shifting up to 60% and get longer engine life.

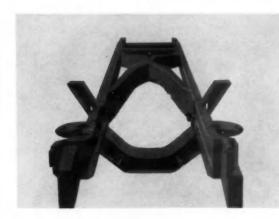


MOST	PULLING POWER OVER A BROADER	LOWER RPM RANGE
Model	Gross Torque Range	Max. Horsepower
702	625-630 @ 1400-2100	275 @ 2400

RIGHT NOW YOU, TOO, CAN

LIGHTER, STRONGER TRUCK FRAMES!

Fleets are hauling up to 400 lbs. extra payload just from the weight savings from GMC's exclusive I-beam, welded frame. This 8000 Series frame is also up to 28 times more rigid than other comparable frames.





MORE RESPONSIVE, SMOOTHER POWER! NEW GMC V-6 DIESEL

Fleets "working by the clock" praise the instant throttle response and steadier flow of power from GMC's 2-cycle design. You get power on *every* downstroke. There are no wasted strokes or power lags. This work-proved 71 Series gives you more power per cubic inch displacement, more power per pound and more power per dollar!



SIMPLER, MORE PRACTICAL AND DURABLE, AND MORE ECONOMICAL! GMC's precision-built injector meters exactly the right amount of fuel to each cylinder, times the injection and atomizes the fuel for most efficient burning — eliminates troublesome high-pressure lines and complicated pumps.



SAVE UP TO 5% ON FUEL and increase usable horsepower up to 7% with GMC's exclusive hydraulic fanstandard equipment.

CHOOSE FROM	THESE EFFICIENT, FUEL	-SAVING GMC DIESELS
Model	Max. Torque	Max. Horsepower
6V-71	577 @ 1200	189 @ 1800 210 @ 2100*

*No extra cost

N CUT JOB TIME, CUT COSTS



LONGER BRAKE LIFE, SURER STOPS! You get cooler running, longer lasting brakes with new centrifuse drums. Bigger lining areas give added lining life and quick, safe stops.



BONUS PAYLOADS WITH LESS TRUCK WEIGHT! This new lightweight tandem is practically service-free, too. True axle alignment and equal load distribution increase tire and axle life. around valves and cylinders plus circulation of up to 176 gallons of water a minute practically eliminates all life-killing "hot spots." Temperature variation throughout entire engine is less than 4 degrees!

HIGH-STRENGTH, RIGID ENGINE BLOCK! New short V-6 block, extra strong inner ribbing, staggered cylinders, deep skirt 8" below crankshaft centerline—all give greater rigidity, add years of life to components.

CRANKSHAFT TWICE AS HUSKY AS COMPARABLE V-8s! A real workhorse. Big, rugged connecting rods and large bearing areas assure long life.



WITH THE GREATEST TRUCK A



LONGER TRUCK LIFE, greater driver and cargo protection, all yours with new GMC independent front suspension and torsion bar springs. Heavy-duty models have new, wider, high-strength I-beam front axles.



SELF-ADJUSTING, EASY-RIDE REAR SPRINGS! New, unique cam action automatically adjusts springs for a smoother ride at all times. Springs last longer because they only support weight. Radius rod leaf (red) transmits all torque and braking forces.



EASIER TO SERVICE! 25% fewer parts than most V-8s... spark plugs inside "V"—easy to reach, easy to change... new simplified valve adjustment... dependable 2-barrel carburetion.

MORE USABLE POWER! Shortest stroke of any comparable truckbuilt engine reduces powerrobbing friction and costly wear, saves fuel and increases engine life.

EXTRA-HIGH CAPACITY LUBRICA-TION! Full-pressure system has high output pump that supplies up to 14 gals. per minute. Full-flow filter cleans every drop of oil before it reaches engine's working parts.

NEW TREND-SETTING, EXTENDED-LIFE V-6 ENGINES — AVAILABLE ONLY IN GMC TRUCKS!

Tough, accurate tests show new GMC V-6 engines—with proper maintenance and reasonable use—have a life potential of up to 200,000 miles without a major overhaul.

High output at low rpm gives you the torque to get loads moving and the horsepower to maintain top legal road speeds.

Model	Gross Torque Range	Max. Horsepower
305A	258-260 @ 1400-2200	150 @ 3600
305B	264-266 @ 1100-2000	150 @ 3600
305C	268-270 @ 1200-2100	165 @ 3800
351	308-312 @ 1400-2400	180 @ 3400
401	375-377 € 1200-2000	205 @ 3200

ADVANCES IN 20 YEARS!

HAUL UP TO 2000 POUNDS EXTRA PAYLOAD! New GMC 48" aluminum tilt-cab diesels are the shortest, lightest heavy-duty tractors in their class . . . haul maximum loads and trailer lengths in every state. Full tilt provides 100% engine accessibility . . . saves time and money. GCW to 76,000 lbs. Diesel engines—189 to 210 hp.



Ohio Fleet Owner

DISCOVERS OIL!



Mr. C. V. Dean, owner of Main Truck & Trailer Service, Inc., Springfield, Ohio, shown here with his daughter Linda and son Kerry, operates 34 tractors—and provides complete maintenance service for over 400 client vehicles.

Mr. C. V. Dean discovered the richest, most complete motor oil in the world—Pennzoil. And it has helped make him one of the most successful fleet owners in the Midwest!

"I deal in service for long-distance haulers," says Mr. Dean. "A big job that calls for a motor oil I can depend on to keep engines running cleanly, smoothly, efficiently... even in extreme temperatures and temperature changes. That's why I've used Pennzoil for the past seventeen years. Drivers like the increased horsepower they get with Pennzoil Z-7. And our records indicate we get better gas mileage and have less engine trouble between overhauls."

This amazing Pennsylvania oil is so rich it gives double the protection demanded. So complete it needs no extra additives. Refined from 100% pure Pennsylvania crude, it contains special power ingredient Z-7 that keeps engine parts so clean the oil can give peak lubrication protection full time.

Discover Pennzoil Z-7 for your fleet. Distributors listed in the Yellow Pages.

Richest, most complete motor oil in the world

Member Penn. Grade Crude Oil Assn., Permit No. 2, Oil City, Pa.



VOLKSWAGEN

ENGINES

 Engine
 Displace Bore & Stroke (in.)

 Model
 ment (cu in.)
 Cyl
 Stroke (in.)

 Volkswagen 1192
 72.74
 4
 3.03 x 2.52

Oil Pressure 1192 37 psi @ 2500 rpm

Compression Pressure
1192... 7 psi @ cranking speed

IGNITION

 Cam Angle
 42 deg

 1192
 42 deg

 Breaker Point Gap
 016 in.

 Spark Occurs
 016 in.

 Compares Before Top Center
 1192

 1192
 7½ deg

SPARK PLUGS

Make & Type

1192...AC 43L, AL AE6 or CH L10S

Size

1192 14 mm

Gap

Torque

1192 22-29 lb-ft

VALVES

Operating Tappet Clearance

1192 (Cold)Inlet: .004 in. Exhaust: .004 in.

Seat Angle

1192Inlet: 45 deg Exhaust: 45 deg

TORQUE

Cylinder Head Bolt

1192 14 & 22 lb-ft

VALVE SPRINGS

Free Length

1192 1.1 in.

BATTERY

Amp-Hour Capacity

1192 77

Plates Per Cell

1192 18

Terminal Grounded

1192 Neg

FRONT END

Toe-In

77 MMLoaded: .04 in. Unloaded: .08-.2 in.

Camber

77 MM 3/4 deg

Caster

77 MM 0 deg

CAPACITIES

Crankcase

1192 5.3 pt

Transmission—Rear Axle

77 MM 5.3 pt Refill: 4.2 pt

LUBRICATION

Crankcase

1192...Above 86 deg use SAE 30; Between 32 and 86 deg use SAE 20 or 20W; Below 32 deg use SAE 10W; Below —13 deg use SAE 5W

Transmission—Rear Axle

1192...Above 32 deg use SAE 90; Below 32 deg use SAE 80.

PREVENTIVE MAINTENANCE PROVES ...

ORDINARY FUEL ADDITIVES ARE OBSOLETE

FOR DIESEL ENGINES . . .

THE CURE for diesel fuel injector clogging . . . moisture . . . engine deposits — THE ANSWER to longer injector life . . . greater efficiency . . . more mileage. Not an ordinary diesel fuel additive, POWER-PAL is a concentrated Diesel Fuel Conditioner that will solve many of your diesel equipment problems.

*FREE SAMPLES AND LITERATURE

(Attach your name and address to this ad and mail)





Now — A.S.T.M. tests prove Power-Pal products disperse and remove more gums in fuels than all other leading brands tested.

FOR GASOLINE ENGINES . .

PLUS TEN

PLUS

 Cleans carburetor of gums and varnishes for faster starting and better gas mileage • Frees sticky valves and removes carbon, restoring power and pick-up and improving compression • Prevents fuel line clogging by removing moisture • Rids engine of gas knock and engine rumble,

MOTIVE SPECIALTIES DIVISION Dept. CCJ NUTMEG CHEMICAL COMPANY

130 Haven St. New Haven, Conn.



"We've always demanded a quality bearing . . .

. . . and Clevite 77 gives us exceptional service. With 228 buses to keep running, we can't afford to fool around with anything but the best. In some cases, we've put the same Clevite 77 bearings back in after 150,000 miles. The overlay hadn't even started to wear."

Other fleet operators like Mr. Galloway know that Clevite 77 bearings have the built-in quality to perform at a profit. Their patented tri-metal construction gives smoother operation and longer trouble-free performance. For your next engine overhaul, get Clevite 77 from your NAPA jobber—he has a complete stock.

Low premium "customer insurance" is yours when you install . . .

MONMOUTH Engine Bearings

CLEVITE SERVICE: Cleveland Graphite Bronze . Division of Cleville Corporation . Cleveland 3, Ohio

states C.W. Galloway, Superintendent of Equipment, Virginia Transit Company, Richmond, Virginia



√ Check Your Tune-Up

VOLVO

Oil Pressure

All engines ...

D96B, TD96B...

Seat Angle

Face Angle

Compression Pressure

D47A384 psi @ 200 rpm D67C398 psi @ 200 rpm

VALVES

TD96BInlet: 30 deg

All othersInlet: 45 deg

TD96BInlet: 29½ deg

All othersInlet: 441/2 deg

Operating Tappet Clearance All modelsInlet: .016 in.

ENGINES

Engine	Displace-		Bore &
Model	ment (cu in.)	Cyl	Stroke (in.)
D47A	287	6	3.75 x 4.33
D67C	410	6	4.125 x 5.12
D96B	585	6	4.75 x 5.
TD96B	585	6	4.75 x 5.515

42 psi @ 1000 rpm

385 psi @ 200 rpm

Exhaust: .018 in.

Exhaust: 45 deg

Exhaust: 45 deg

Exhaust: 441/2 deg

Exhaust: 441/2 deg

TORQUE

Cylinder Head Bolt

D47A,	D67C .					100-116	lb-ft
D96B,	TD96B				*	130-145	lb-ft

BATTERY

Amp-Hour Capacity

Truck	M	le	H	i	el	1								
L375								,		×	*	*		190
L485									*					266
L495														133

Terminal Grounded

A11	models							Neg

FRONT END

A11	models	 0.12 in

D47A,	D67C						100-116	lb-ft
D96B.	TD96B			Ü	Ĺ		130-145	lb-ft

CAPACITIES

Crankcase

Camber (Positive)

L375

All others

L375

All others

L375

All others

Caster (Positive)

11/2 deg

1 deg

11/2 deg

21/4 deg

71/2 deg

51/2 deg

Truck Model

Truck Model

King Pin Slant Truck Model

D47A						*		*			101/2	qt
D67C											15	qt
D96B.	T	ľ)	9(6	B					19	qt

Transmission

ZFS5-	33 .						71/2	pt
Volvo	K1						14	pt
Volvo	K3						16	pt

Rear Axle

Eaton	16602 .									18	pi
Eaton	18803,	1	l	9	5	0	3	*		20	p

Cooling System

Truck Model

L375							×		*	*	24	qt
L485											23	qt
L495											32	qt

VALVE SPRINGS

Free Length

D47A,	D67C .								2.83	in.
D96B,	TD96B			0)1	at	e	r	2.90	in.
				I	n	n	16	r	2.79	in.

Pressure

D47A, D67C...

177-197 lb @ 1.85 in. D96B, TD96B...

Outer: 142-158 lb @ 1.75 in. Inner: 51-55 lb @ 1.38 in.



LUBRICATION

Crankcase

All engines...Above 90 deg use SAE 40; From 32 to 90 deg use SAE 30; Between -5 to -32 deg use SAE 20; Below -5 deg use SAE 10.

Transmission

All models... Use SAE 90 all year.

Rear Axle

All models-Use Hypoid oil SAE 90 all year.

COMMERCIAL CAR JOURNAL, April, 1960

GUIDE RELIABILITY PASSES EVERY SAFETY AND PROFIT CHECK!

Guide reliability wins everyone's OK-from the manufacturer who specifies Guide Lamps to the highway patrolman who checks your trucks through.

You'll find drivers take Guide reliability for granted, but your bookkeeper needs proof...and gets it! He knows that Guide's trouble-free service in any season saves time, saves cost and keeps your trips on schedule.

Once your fleet is completely Guide-equipped, you, too, will be convinced of Guide reliability. So make sure that every new item of lighting equipment is marked with the word "Guide"... the brightest and most reliable name in lights. You'll find that Guide Lamps are selected by the leading truck and trailer manufacturers. **GUIDE LAMP**



GUIDE LAMP DIVISION / GENERAL MOTORS CORPORATION / ANDERSON, INDIANA







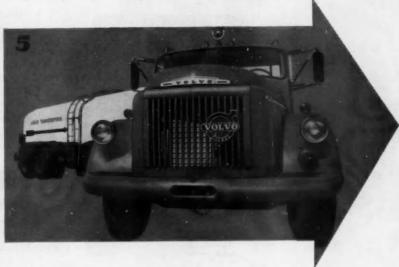
THE DYNAMIC NEW SYMBOL

Famous Swedish Volvo Diesel Trucks are now taking the load off the trucker: from 90 hp. dump up to more than enough horsepower for 68,000 GVW.









IS ROLLING!

Now rolling! 1—Tractor Model 495—150 hp.—typical medium dump body. Ask about Volvo tandem dump applications. 2—Model 375—90 hp.—16 ft. aluminum van for stop-and-start 100 mi.-a-day city deliveries—9,270 lbs. net tractor & van. 3—Model 485—115 hp.—35 ft. van—17,000 lbs. net furniture load—43,000 gross. 4—Model 375—90 hp. 5 cu. yd. dump—9,550 lb. net tractor & dump. 5—Model 495—185 hp. with special liquid tank body—4500 gals. syn-

thetic latex rubber-39,000 net-63,050 GCW.

Drivers swear by 'em—not at 'em! In dozens of American road tests in last 3 years, drivers claim they like Volvo's cab comfort, roadability and general performance.

Test drive to prove to yourself that horsepower vs. horsepower, gasoline or diesel, pound for pound—net, gross or combination—Volvo will outload, outpull or out-"drive" anything on the highways under fair competitive test stand-

ards! Write today for more information. Limited selected dealerships temporarily open. Volvo Import, Inc., Truck Div., 357 Wilson Ave., Newark 5, New Jersey.

VOLVO

The finest, most rugged carriers on the road today. Products of superb Swedish engineering & craftsmanship.

WALTER

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl	Bore & Stroke (in.)
Waukesha 6MZA	404	6	41/4 × 43/4
Waukesha 140GZ	554	6	45% x 51/2
Waukesha 145GK	779	6	51/4 x 6
Waukesha 145GKB	779	6	51/4 x 6
Cummins NHB-600	743	6	51/8 x 6
Le Roi TH-540	540	8	41/2 x 41/4

Oil Pressure

Wau 6MZA, 145GK...

40 psi @ 1500 rpm

Other Waukesha engines ...

40 psi @ governed speed

Cum NHB-600...

30 psi @ governed speed Le Roi TH-540...

45 psi @ governed speed

Compression Pressure

(At cranking speed)

1000	OR OCCUPATION AND ADDRESS OF	,	~	ĸ	-	-	4			
Wau	6MZA							1	110	psi
Wau	140GZ	*						90-	95	psi
Wau	145GK							85-	90	psi
Wau	145GKE	3						95-1	100	psi
Le B	oi TH-54	10	1					125-1	140	nei

IGNITION

Cam Angle (Dwell)

Wau	engines				31-37	deg
Le R	oi TH-54	10			21-30	deg

Breaker Point Gap

All gasoline engines.. .018 in.

Spark Occurs

(Degrees Before Top Center)

Wau engines Top Center Le Roi TH-540.... 35 degi

SPARK PLUGS

Make & Type

		engines	×					СН	J-6
Le	Roi	TH-540		*	*	*	*	CH	J-8

Size

All gasoline engines... 14 mm

Gap

All V	Vau	engines				.025	in.
Le R	oi T	H-540			*	.027	in.



. . And this time, Fathead, don't drive past the ball park!"

VALVES

Operating Tappet Clearance

(Cold Waukesha engines, others are for hot engine)

Wau 6MZAInlet: .009 in.

Exhaust: .019 in.
OthersInlet: .013 in.

Exhaust: .025 in. Cum NHB-600.....Inlet: .014 in.

Exhaust: .027 in.

Le Roi TH-540...

Inlet & Exhaust: .013 in.

Seat Angle

Wau	140, 145	Inlet:	30	deg
		Exhaust:	45	deg
Le R	toi TH-	540	45	deg

VALVE SPRINGS

Pressure

(Valve Open)

Wau 6MZA...

110 lb @ 1 31/32 in.

Wau 140GZ...

Inner: 70 lb @ 1 7/16 in.

Outer: 127 lb @ 1 21/32 in.

Wau 145GK, 145 GKB...

Inner: 70 lb @ 2 1/16 in. Outer: 104 lb @ 2% in.

Le Roi TH-540...

106 lb @ 1 3/5 in.

TORQUE

Cylinder Head Bolt

Wau 6MZA 73-75 lb-ft Wau 140GZ 175 lb-ft Wau 145GK, 145GKB...

Long: 175 lb-ft Short: 150 lb-ft

BATTERY

Amp-Hour Capacity

All	models								1	50

Plates Per Cell

All	models		*				×	*		1	7

SAE Group No.

All	models									4D
23.04	THAMAN				*			100		36.80

Terminal Grounded

A 11	madala	Don

COMMERCIAL CAR JOURNAL, April, 1960

FRONT END

Toe-In

All models 0-3/16 in.

Camber (Positive)

All models 11/2 deg

Caster (Positive)

All models 5 der

King Pin Slant

All models 2 deg

CAPACITIES

Crankcase

Wau	6MZA							8	qt
Wau	140GZ							10	qt
Wau	145GK	&	G	K	B			18	qt
Cum	NHB-6	00						28	qt
Le R	oi TH-	40						12	at

Transmission

Truck Model

FZM	•	ø						*		•	•	26	pt
Other	8					0	*					33	pt

Rear Axle

FZM			0				*				5	pt
Other	8			,							7	pt

Cooling System

FZM									*	32	qt
Other	8									57	at

LUBRICATION

Crankcase

All gasoline models... Use SAE 30 in Summer, SAE 20 in Winter.

All diesel models...Use SAE 20 in Summer, SAE 10 in Winter.

Transmission

All models...Use SAE 140 Extreme Pressure lubricant all year.

Rear Axle

All models... USE SAE 140 Extreme Pressure lubricant all year.

MODEL NUMBERS

Truck Model...See name plate on

Engine...See plate on rear left of block.

Send Today for this New Data on Upward-Acting Doors for Every Need



Kinnear originated the interlocking slat door

Get full details on this complete line of time-saving, cost-slashing doors. They add highest efficiency to space-saving, coiling upward action. Kinnear offers a wide choice of flat and curved slats—fabricated of aluminum, zinc-coated steel, or other metals. They fit every need, from small counter openings to largest doorways. Slat sizes range up to the seven-inch "Goliath" slat at the extreme left, above — maximum protection against wind,

weather, intrusion or vandalism!

Zinc-Coated Dual Protection

Kinnear Steel Rolling Doors feature extra-heavy hot dip galvanizing! 11/4-ounces of pure zinc per square foot of metal (in accordance with ASTM standards). And Kinnear's special phosphate treatment makes this zinc surface ready immediately for thorough paint grip.

Make sure you get this complete door guide — check it now!

KINNEAR
ROLLING DOOR J
Saving Ways in Doorways

The KINNEAR Mfg. Co.

FACTORIES: 2100-20 Fields Ave., Columbus 16, Ohio 1742 Yosemite Ave., San Francisco 24, Calif. Offices and Agents in All Principal Cities

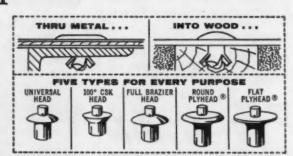


"I'll tell you why we insist on Drive Riveted linings in all our new equipment too..."

"It's because they require no servicing. You don't have to go over the interior periodically to tighten up the fasteners. Southco Drive Rivets stay tight.

"And big PLY-HEAD drive rivets never crush the plywood and work loose.

"You can put them in fast, too. On new or repaired equipment we want Southco Drive Rivets."



Southco Division, South Chester Corp., 228 Industrial Highway, Lester, Pa.

SOUTHCO

FASTENERS IMPROVE TRUCK BODY,
TRAILER AND BUS CONSTRUCTION

PHONE YOUR LOCAL SOUTHCO DISTRIBUTOR



OUT FRONT IN PAYLOAD AND PERFORMANCE ...

TIMKEN-DETROIT® SERIES FRONT AXLES

They're built to take it-designed for greater front end stability, greater safety, greater maneuverability, longer vehicle life! Timken-Detroit Front Axles give greater strength with no additional weight. They're the world's most complete line of front axles, with capacities ranging from 3,750 pounds to 40,000 pounds. For better up-front performance on any size truck or bus, specify Timken-Detroit F-900 Series Front Axles. You get all these advantages of superior design:

Stronger axle centers. An "equalized-I" section between the spring pads strengthens construction. The reverse Elliott design makes this axle center ideal for maximum resistance to deflection under load and during braking.

Improved steering knuckles. Deflection is held to a minimum by large knuckle spindles and improved design of knuckle section between spindle and upper and lower

Less stress on steering arms. As a result of special cross section and uniform design, stresses imposed by steering are distributed uniformly without concentration at any one point.

Simple maintenance. Rugged construction and simplified design make maintenance easier, less costly. Location of lubrication points makes lubrication faster and easier.

Another Product of ... ROCKWELL-STAN

CORPORATION

Transmission and Axle Division, Detroit 32, Michigan

√ Check Your Tune-Up

WHITE

ENGINES

Engine Model n	Displace- nent (cu in.)	Cyl.	Bore &	-
116A	298	6	33/4 x 4	1/2
230A	340	6	4 x 4	1/2
250A, 450A, 460A, 462A	386	6	4 x 5	1/8
470A	477	6	43/4 x 5	
Diesels (Cummins)				
JT-6-B	401	6	43/4 x 5	
NH180, NH195	672	6	47/8 x 6	
NH220, NHB600	743	6	51/8 x 6	,
HRF, NTOL-6B	743	6	51/8 x 6	

Oil Pressure

All gasoline engines...

40 psi @ 2200 rpm

Cummins engine (with oil temperature @ 140 deg)

Cummins JT-6 30-60 psi

All others 30-50 psi

IGNITION

Cam Angle

All gasoline engines. 31-37 deg

Breaker Point Gap

All gasoline engines... .022 in.

Spark Occurs

(Deg Before Top Center)
Engine

SPARK PLUGS

Make & Type

All gasoline engines.. CH D-10

Size

All gasoline engines... 18 mm

Gap

All gasoline engines...
.023-.028 in.

Torque

All gasoline engines... 34 lb-ft

VALVES

Operating Tappet Clearance

All gasoline engines...
Inlet & Exhaust: zero
Cummins engines (with oil temperature @ 140 deg)

perature @ 140 deg)
JT-6Inlet: 0.15 in.

Exhaust: .025 in.

HRFInlet: .014 in.

Exhaust: .022 in.

All othersInlet: .014 in.

Exhaust: .027 in.

Seat Angle

All gasoline engines...
Inlet & Exhaust: 45 deg

Cummins engines...
Inlet: 30 deg
Exhaust: 30 deg

Face Angle

All gasoline engines... Inlet & Exhaust: 44½ deg

TORQUE

Cylinder Head Bolt

All gasoline engines...
105-110 lb-ft
Cummins JT-6...
11/16 in.: 280-300 lb-ft

34 in.: 380-400 lt-ft All others 430-450 lb-ft

VALVE SPRINGS

Free Length

Engine

 116A
 2 19/32 in.

 230A
 2 1/16 in.

 250A, 450A
 2 9/16 in.

 460A, 462A
 2 9/16 in.

 470A, 490A
 2 17/32 in.

 Cummins JT-6
 2.539 in.

 Cummins HRF
 3.484 in.

 All others
 3.313 in.

Pressure

Engine

116A... 145-155 lb @ 1¾ in. 230A, 250A, 450A, 460A, 462A... 154-164 lb @ 1 41/64 in. 470A, 490A... 177-187 lb @ 2 17/32 in. Cummins JT-6...122 lb compressed to 1.673 in.

Cummins HRF... 179½-198½ lb compressed to 2.1875 All others..104-114 lb compressed

All others..104-114 lb compressed to 1.8437

BATTERY

Amp-Hour Capacity

Truck Model

3015WLB... (one 6-volt battery)

WC22PLT, 3000T, 4200, 4200T, 4264, 4264T, 4264OH, 9000T, 9064, 9064T....

(one 12-volt battery) 60

3400TD, 3462TDP, 4400D, 4400TD, 4400TDL, 4462TDP, 4464D, 4464TD, 5400TD, 5462TDP, 5464TD, 9062TDP...

(four 12-volt batteries)

FRONT END

60

Toe-In

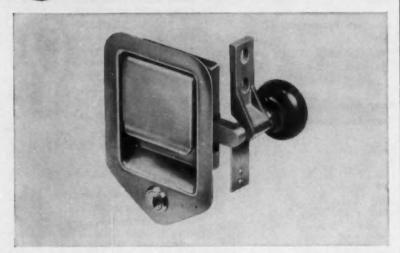
All models 1/8 in.

Camber (Positive)

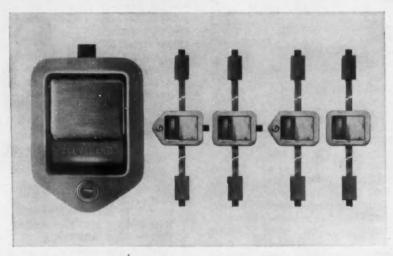
All models 1 deg

Caster	1007B, 1026B, 1057B,		Note: Following models take an
Axle Model	1076B	30 pt	additional 2 pt in inter-axle
12D, 58D, 59D, 63D, 64D,	1006B, 1056B	31 pt	after reassembly.
79D, 115D +2 deg 50 mi	1027B, 1037B, 1077	36 pt	
116D (4-wheel models),	1050B	44 pt	411C, 422C. Each axle: 24 pt
			413C, 417C, 420C, 421C
117D, 121D +2½ de	Auxiliary Transmissions		Each axle: 22 pt
116D (6-wheel models) —2 de		7 pt	415CEach axle: 25 pt
120D +31/4 de	10Н, 19Н, 20Н	8 pt	418CFront: 26 pt
	12H, 13H, 18H	12 pt	Rear: 32 pt
King Pin Slant	1211, 1011, 1011	ra pr	425C Front: 30 pt
			Rear: 32 pt
Axle Model	Boon Aula		426C, 427CEach axle: 22 pt
12D, 58D, 59D 8½ de			SFDD 3020. Each axle: 27 pt
63D, 64D 8 de	Rear Axle Model		
116D, 117D, 115D, 121D. 6 de	33C	. 8 pt	
120D 0 de	33C6	18 pt	Cooling System
	88C	10 pt	Truck Model
	105C, 107C	11 pt	
	108C	29 pt	WC series
	116C	16 pt	With 460A & 462A engines: 26 qt
CAPACITIES	124C, 134C, 138C, 233C,	To be	With other gas engines: 24 qt
	327C, 338C	26 pt	WC Diesel series 40 qt
Crankcase			3014 through 3022 28 qt
Engine Model	133C, 189C, 336C	24 pt	3026, 302262, 302264 29 qt
	126C, 135C, 324C	32 pt	3000T series with 450A,
116A, 230A, 250A, 450A,	45C, 82C, 89C, 96C, 106C,	~ ~	460A, 462A engines 31 qt
460A, 462A 12		22 pt	3000T series with 470A,
470A, 490A 15		34 pt	490A engines 40 qt
Cummins JT-6 16		31 pt	3000TD series 29 qt
Other Cummins engines. 28	t 232C, 235C, 333C, 389C.	44 pt	3400TD series42 qt
	292C, 293C, 295C, 318C.	18 pt	4000T series 38 qt
	294C	25 pt	4000TD series 34 qt
Transmission	308C	30 pt	4200T series
Transmission Model	315C, 322C	40 pt	
400B 5½		15 pt	With 450A, & 462A engines: 38 qt
424B 6	t 319C	23 pt	With 470A, & 490A engines: 43 qt
	t 206C, 306C, 328C	20 pt	4400TD series 38 qt
423B, 507B, 520B, 522B,	320C, 329C	17 pt	5000TD-5400TD series 40 qt
	t 321C	19 pt	9000T series
	t 325C, 333TC, 389TC	35 pt	With 450A, 460A, 462A: 33 q
427B 12	t 83C, 90C,Each axle:	14 pt	With separate surge tanks
	t 87CEach axle:	22 pt	and same engines 40 q
			With 470A & 490A engines
566B 19		38 pt	and separate surge tanks
	The transfer and the second	26 pt	41 q
		24 pt	9000TD series
510B, 560B 23	Power divider:	3 pt	With JT-6-B engine: 36 q
421B, 506B, 515B, 516B, 517B,	401C Each axle:	25 pt	With NHB & HRFB: 34 q
521B, 527B, 531B,	402CEach axle:	11 pt	With NHB & HRFB:
537B, 541B, 556B,	Power divider:	6 pt	engines and separate
558B, 559B, 565B,	403C Each axle	10 pt	surge tanks 40 q
581B, 591B 24	Power divider:	7 pt	burge thing av q
001D, 001D 24	404C Each axle:	30 pt	
520B, 522B, 524B, 561B,	405C, 406CEach axle:	24 pt	
574B, 1003B 16	ot 1075	00 -4	CHIPPIONE IONE
1004B 29	t 407CFront:	26 pt	LUBRICATION
900BFront: 16	t Rear:	32 pt	
Rear: 8	Power divider:	3 pt	Crankcase
1011BFront: 24		27 pt	All gasline engines Heavy duty
Rear: 12			SAE 30 summer, heavy duty
Avoir 1 12	412C, 424C. Each axle:		SAE 20 winter.
(Note: On following transm	-		Cummins enginesAbove 90 de
sions, fill through main tra	414CEach axle:		
mission hole to auxiliary pl	423C Each axle:		use SAE 30; Between 32 and
mission note to auxiliary pr	SFD157Each axle:	9 pt	90 deg use SAE 20; Below 3
level.)			A CATS 40777
	SFD3020 Each axle:	27 pt	deg use SAE 10W. (TURN TO NEXT PAGE, PLEASE)

HARDWARE Cleveland



NEW . . . SLIDING DOOR LOCK, designed for flush installation. Increases available load space up to 16 cu. ft. without changing body size. Outside handle and lock mechanism fit entirely within the thickness of the sliding door. Latches door in both open and closed position. Drop-forged front and rear strikers. Available with or without key lock. 2318 A & B.



2-POINT OR 3-POINT FLUSH LOCK. Combines flush lock appearance with exclusive multi-point action. Mounted in any position, flush handle actuates forged and hardened steel mechanism with smooth, long-wearing action. No rights or lefts . . . one pattern fits everywhere! 2-point or 3-point locks, with or without key. 2316 A & B; 2317 A & B.

For complete information on "Cleveland" Truck and Bus Hardware, write to Forge & Fittings Division, H. K. Porter Company, Inc., 3270 East 79th Street, Cleveland 4, Ohio.

FORGE AND



FITTINGS DIVISION

H. K. PORTER COMPANY, INC.

PORTER SERVES INDUSTRY with steel, rubber and friction products, asbestos textiles, high voltage electrical equipment, electrical wire and cable, wiring systems, motors, fans, blowers, specialty alloys, paints, refractories, tools, forgings and pipe fittings, roll formings and stampings, wire rope and strand.

WHITE

Continued from Page 197

Transmission

Transmission Model

423B, 512B, 558B, 559B, 561B, 562B
...SAE 50 engine oil Summer and Winter.

Other transmissions.. Use SAE 90 mineral oil Summer and Win-

Auxiliary Transmissions

15H, 18H...Use SAE 90 mineral oil Summer and Winter.

Other auxiliaries... Use SAE 50 engine oil Summer and Winter.

Rear Axle

Use SAE 140 straight mineral oil Summer and Winter in the following axles: 83C, 404C, 405C, 414C and SW3458

Use SAE 140EP oil Summer and Winter in the following axles: 87C, 90C, 94C, 106C, 108C, 116C, 132C, 135C, 136C, 138C, 206C, 208C, 232C, 235C, 306C, 308C, 322C, 325C, 327C, 333C, 333TC, 335C, 336C, 338C, 389C, 389TC, 401C, 406C, 408C, 410C, 411C, 412C, 413C, 415C, 417C, 418C, 420C, 421C, 422C, 423C, 424C, 425C, SFD157, SFD3020, and SFDD3020.

Use SAE 90EP oil Summer and Winter in all other axles.

MODEL NUMBERS

Truck model... See identification plate inside cab.

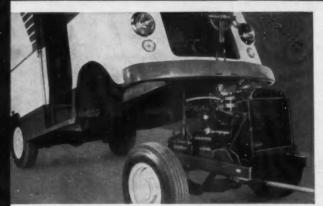
Engine model...See left side of engine either on block over generator or under oil filter.

Transmission model... See plate on right hand side of housing.

Front axle model...Stamped on left hand side of front of axle beam.

Rear axle model...Stamped on top of differential housing.





Removable power dolly permits quick engine switch . . . quick return to duty. No spare trucks needed.

Never was a truck able to get so much work done for so little money. WHITE's new PDQ is ingeniously designed to carry maximum loads... to let drivers make the most calls with the least fatigue... to keep operating and maintenance costs low. Get a demonstration today!

How White's PDQ gives you a competitive edge:

Fiberglass Skylight Roof Removable Power Dolly Low-Step Through Aisle Parallel Loading

Low Gas Consumption Unitized Construction All Truck Components Swivel Seat

Service in all principal cities

PDQ Division, The White Motor Company Montpelier, ohio

WORLD LEADER IN HEAVY DUTY TRUCKS



...60 YEARS OF LEADERSHIP

WHITE

WILLYS

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl	Bore & Stroke (in.)
L-4	134.2	4	31/8 x 43/8
F-4	134.2	4	31/8 x 43/8
L-6	226.2	6	3 5/16 x 4%

Oil Pressure

4-cyl	engines.					
		35	psi	@	2000	rpm
6-cyl	engines.					

35 psi @ 1700 rpm

Compression Pressure

Engine

L-4				110	psi	@	160	rpm
F-4				125	psi	@	185	rpm
L-6				130	psi	@	140	rpm

IGNITION

Cam Angle (Dwell)

	-					
4-cyl	engines				37-43	deg
6-cvl	engines		-		36-42	deg

Breaker Point Gap

All	engines	 .020 in.

Spark Occurs

(De	grees	Be	ef	0	r	e	T	0	P)	(36	er	ter)	
All	engin	es												5	de

SPARK PLUGS

Make & Type

All	engines					
		AL	A-7	or	CH	J-8

Size

A 11	Engines	14 mm

Gap

All	engines	 .030 in

Torque

All	engines				28-30	lb-ft

VALVES

Operating Tappet Clearance

Engine

L-4						
	Inlet	&	Exhaust:	.016	in.	
F-4			Inlet:	018	in	

L-6					
	Inlet	&	Exhaust:	.014	in.

Exhaust: .016 in.

Seat Angle

L-4	Inlet &	Exhaust:	45	deg
F-4	Inlet &	Exhaust:	45	deg
L-6		. Inlet:	30	deg
		Exhaust:	45	deg

Face Angle

L-4,	F-4					
		Inlet	&	Exhaust:	44	deg
L-6				Inlet:	30	des
				Exhaust:	44	dec



"Oops, forgot to tell them the brakes are too tight!"

TORQUE

Manifold Bolts

4-cyl	engines				29-35	lb-ft
6-cyl	engines				30-35	lb-ft

Cylinder Head Bolt

4-cyl	engines				60-70	lb-ft
6-cvl	engines				35-45	lb-ft

VALVE SPRINGS

Free Length

Engine

L-4.				
	Inlet &	Exhaust:	21/2	in

Exhaust: 2½ in.	L w	*		*	9		×				mier.		T.	91/92	11	S.o.
							E	b	cl	b	aust:	,	21	1/2	ir	1.

Inlet & Exhaust: 1 31/32 in.

Pressure

L-4					120	lb	@	1.75	in,
F-4					153	lb	@	1.40	in.
L-6	4				107	lb	@	1.312	in.

BATTERY

Amp-Hour Capacity

All	models								50

Plates Per Cell

All	models																			9	
-----	--------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

Terminal Grounded

A11	models	 Neg

SAE Group

All models	2	SH
------------	---	----

FRONT END

Toe-In

All	models	 .047094	in.

Cambor

DJ-3A, 4 x	2	models	1	deg
All others		* * * * * * * *	11/2	deg

Caster

All	models						3	deg
***	111000010				*		40	w-E

King Pin Slant

All models	714	don

CAPACITIES

Crankcase

L-4							×	*		*		4	qt
F-4		*										4	qt
L-6												5	qt

Transmission

Truck Model

DJ-3A, F4-134 (4x2)	11/2 pt
CJ series	. 3 pt
F4-134 (4 wd & 4x4)	. 3 pt
FC series	. 3 pt
L-6 series	21/2 pt

Rear Axle

DJ.	-3A, F4	-134	(4x2)	2	pt
CJ	series,	FC-1	150	21/2	pt
All	others			3	pt

Cooling System

FC-150	10	qt
All other 4-cyl	11	qt
L-6 series	12	qt
FC-170	11	qt

LUBRICATION .

Crankcase

All models...Above 32 deg use SAE 30 or 10W-30. Not lower than 10 deg use SAE 20, 20W, 10W-30 or 10W-20. As low as 10 deg use SAE 20W, 10W-30 or 10W-20. As low as -10 deg use SAE 10W, 10W-30 or 10W-20. Below -10 deg use SAE 5W or 5W-20.

Transmission

All models...Use GL-4 type lubricant. In Summer use SAE 90, in Winter use SAE 80.

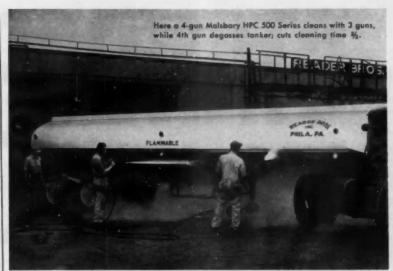
Poor Avia

All models...Use SAE 90 GL-4 type lubricant all year.

MODEL NUMBERS

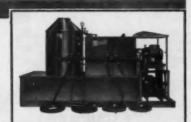
Truck Model...FC-170 — wheel house top panel, right. FC-150 — wheel house top panel, left. On 4x4 and 4x2 models—floor pan riser, left. On 4WD—seat support pan, left. On CJ & DJ series—see dash panel.

Engine Model...L-4 & F-4—See front of block above water pump. L-6—See left of block below coil or at rear of oil filler tube.



Take grief out of equipment cleaning with

MALSBARY HPC CLEANING SYSTEM



Here's the speediest, most efficient system on the market for cleaning equipment, parts, etc. — the all-in-one compact, multipurpose package. Whether your cleaning involves layers of greasy dirt that cause engine overheating . . . heavy, abrasive grime . . . ice and frozen mud . . . dirty parts that slow mechanics . . . degassing tanks for new cargoes or welding repairs . . . too much downtime for cleaning — you'll find the Malsbary HPC system a quick, money-making solution to your equipment cleaning problems.

Key to fast, effective cleaning is the heat, pressure and volume delivered by the Malsbary HPC system. You get:

Hot solution at thermal-hydraulic pressures 2 to 4 times greater than any steam cleaner . . . hot or cold water at a dirt-blasting 300-400 psi . . . gentle rinse or wash water . . . wet steam for degassing and heating . . . and greatest time saver of all, hot solution and cold water, or wet steam and cold water, simultaneously from 2 to 4 guns.

More than 6000 in use. See for yourself how the Malsbary HPC system breezes through the toughest cleaning jobs. Ask your Malsbary dealer about 10-day buy-and-try plan . . . see phone book yellow pages or write us, outlining your cleaning problems.

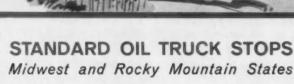
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ASK ABOUT the Malsbary green steam cleaner hose . . . it's durable, oil and abrasion resistant.



STANDARD

6 Big benefits for truckers and drivers in the Standard Oil Truck Stop Plan



TRUCK

Colorado Cortez Glenwood Springs Trinidad Illinois

State and Town

Chester Chicago Chicago Litchfield Moline

Northeastern Illinois

Rock Island

M & M Standard Service Bud's M & M Service Carl's Big Chief Service

Station

Nite Hawk Truck Stop McHugh's Truck Stop McHugh's Truck Stop Varner's Truck Stop Andy's Truck Stop

at five locations.

William's Truck Stop Eckler's Truck Stop Brucker's Truck Stop

U.S. 666 & Col. 789 (2 mi. S.) U.S. 6 & 24 (1½ mi. W.) U.S. 85 & 87 (3 mi. S.)

III. Rte. 3 (1 mi. S.) 4710 S. Archer at 47th St. 6255 S. Wabash at 63rd St. U.S. 66 (3 mi. N.) East End Bettendorf Bridge U.S. 6 & 150, III. 2

Illinois Tollway Stations arranged in pairs on each side of the Tollway

4200 S. Adams St., U.S. 74 24th St. & 5th Ave., U.S. 150 U.S. 30 & 51 (Junction) Indiana Angola

Dyer Dyer Dyer Hammond Haubstadt Michigan City Northern Indiana

Atlantic Denison

Des Moines Ft. Madison Lowden Ogden

Kansas Buffalo

Yasechko's Truck Stop **Broadview Truck Stop**

Stephens & Gilliam's Truck Stop Eddie's Truck Stop Rosenko's Truck Stop

nosemos FIRICR Stop

(N.W. Cor), U.S. 30 & 41

Relisteherg's Truck Stop

Robil's Truck Stop

U.S. 41 (15 mi. N. of Evansville)

U.S. 20 & 421 (S. of city)

Indiana Toll Road—Six Standard Oil stations are strategically located in pairs at three locations on the Toll Road.

Hetrick Standard Service Port Standard Service

Mike Wilson's Truck Stop John Heidbreder's Stop Mensing Truck Stop Ellis Truck Stop

Guiou Truck Stop Long's Standard Truck Stop

V.S. 52 (36 mi. N.W. of Indianapolis)
(S.E. Cor.) U.S. 30 & 41
(N.E. Cor.) U.S. 30 & 41
(N.W. Cor.) U.S. 30 & 41

1/4 mi. N. of Toll Road, U.S. 27

U.S. 6 U.S. 30 & 59 (Junction) and Iowa

U.S. 53 & 59 (Junction) and low 141 & 4 U.S. 65 & Iowa 6 (E. of town) U.S. 61 & Iowa 2 (½ mi. W.) U.S. 30 U.S. 30 (E. of town)

U.S. 75

FOR THE TRUCKER

- 1. Ticket-printer pumps. Most Standard Truck Stops are equipped with pumps that imprint the amount of fuel dispensed on the sales ticket. The driver gets a copy, a copy goes to Standard's central credit office.
- 2. Centralized billing. Trucking company receives one bill each month. All driver purchases are shown on this one bill. Checking and processing of many separate bills are eliminated.
- 3. One piece Truck Stop Credit Card. Convenient plastic credit cards valid only at Standard Oil designated Truck Stops are issued for each driver. Credit cards together with ticket-printer pumps provide the most convenient way of servicing trucks on the highway.

FOR THE DRIVER

- 4. Convenient stations. Truck Stops have eating facilities, driver rest rooms and sleeping accommodations either at the station or nearby.
- 5. Big driveway and parking accommodations. There's room for the biggest rigs on Standard Truck Stop driveways. Parking areas are big and there's always room to get in and out.
- 6. A complete line of Standard Oil fuels and lubricants: Stanolube HD Motor Oils, Super Permalube—a multi-purpose grease, Red Crown King-Size Regular Gasoline, Standard Diesel Fuels. Experienced servicemen who know how to handle truck servicing are always on duty and ready to help the trucker.



Michigan Escanaba Pontiac

Tekonsha Minnesota Jordan Minneapolis

Missouri Cameron St. Louis

Wentzville Montana

Missoula Nebraska Elkhorn Fremont Grand Island Lincoln

North Dakota Balfour Autoway Truck Stop Steffen's Standard Service

Te-Kon Truck Stop

Dahlke Truck Stop Service Van Gilder's Truck Stop

South Standard Truck Stop Cobe Ablan Standard Truck Stop Swantner Motors, Inc.

Tocco Truck Stop West Missoula Truck Stop

Klebe & Wojcik Parks Standard Truck Stop Bosselman & Eaton, Inc. Salem's Standard Service

Weidler's Truck Stop

U.S. 2 & 41 (Upper Peninsula) 2481 S. Telegraph Rd. U.S. 24, Mich. 58 U.S. 27 and Mich. 60

3 mi, S.W. on U.S. 169 2001 Minnehaha at Franklin (near Minn. 36 & 55)

U.S. 69 & 36 9th & Chouteau City rte. 66 & 50, Truck rte. 40 U.S. 40 (2 mi. W.)

401 Central Ave. W. (U.S. 89 & 91) U.S. 10 (W.)

U.S. 30-A & 92 (W. of Omaha) U.S. 30 at U.S. 275 (E. of town) U.S. 30 (1 mi. E.) U.S. 6 & 77 (Junction)

U.S. 52

Sterling West Fargo

Oklahoma Guymon Hinton

Oklahoma City Oklahoma City South Dakota

Elkton Howard Lemmon Watertown

Wisconsin Cambridge Green Bay Milwaukee Oconomowoc Viroqua Wittenburg

Wyoming

Johnson's Standard Truck Stop John Erickson Truck Stop

Lee Pryor Truck Stop Hinton Junction Truck Stop

George Hackney Truck Stop Summer's Standard Truck Stop

Sky View Truck Stop Clark's Standard Service Phil's Truck Stop Haan's Truck Stop

Stop-Light Truck Stop Dick's Truck Stop Felle's Truck Stop Pieper's Truck Stop John's Truck Stop Mi-Way Garage Truck Stop

Chopping Chevrolet, Inc.

U.S. 10 & 83 U.S. 10 & 52

U.S. 54 U.S. 66 & 281 (W. of Oklahoma City) 616 S. Western St. 108 S. Byers St.

U.S. 14 (2 mi. W. of state line) S.D. 34 U.S. 12 & ST. 73 U.S. 212 & 81

Intersection U.S. 12 & 18 ST. 54 & 57 (1 mi. N. U.S. 41) U.S. 41 (S. side of town) U.S. 16 U.S. 14 & 61 Intersection U.S. 45 & ST. 29

ST. 789 connecting with U.S. 287 & U.S. 20 & 26

CROWN

ENGINES

Engine Model	Displacement (cu in.)	Cyl.	Bore & Stroke (in.)
IHC RD-501	500.976	6	4½ x 5¼
H-S 590-H	590	6	5 x 5
H-S 779-H	779	6	51/4 x 6
Cum NHH-195	672	6	47/8 x 6
Cum NHH-220	743	6	51/8 x 6

Oil Pressure

HC RD-501...

35-45 psi @ 1500 rpm
H-S 590-H...

60 psi @ 2800 rpm
H-S 779-H...

10 psi @ 350 rpm
Cummins engines...

30-50 psi @ 2100 rpm

Compression Pressure

H-S 590-H... 135 psi @ cranking speed H-S 779-H...

100-105 psi @ cranking speed

IGNITION

Cam Angle

IHC RD-501 31-37 deg H-S engines 34-37 deg

Breaker Point Gap

 IHC RD-501
 .019-.024 in.

 H-S 590-H
 .022 in.

 H-S 779-H
 .021 in.

Spark Occurs

 (Degrees Before Top Center)

 IHC RD-501
 5 deg

 H-S 590-H
 5 deg

 H-S 779-H
 2 deg

SPARK PLUGS

Make & Type

 IHC RD-501
 CH J-6

 H-S 590-H
 CH J-6

 H-S 779-H
 CH D-16, D-14

Size

IHC RD-501, H-S 590-H 14 mm H-S 779-H 18 mm

Gap

IHC RD-501028-.033 in. H-S 590-H025 in. H-S 779-H018-.023 in.

Torque

 IHC RD-501
 28-30 lb-ft

 H-S 590-H
 28-32 lb-ft

 H-S 779-H
 34 lb-ft

VALVES

Operating Tappet Clearance

IHC RD-501...

Inlet & Exhaust: .020-.022 in.

H-S engines...

Inlet & Exhaust: .022 in.

Cum engines..Inlet: .016 in.

Exhaust: .028 in.

Seat Angle

Face Angle

 Cum engines...
Inlet & Exhaust: 30

30 deg

VALVE SPRINGS

Free Length

Pressure

IHC RD-501 (valve open)...

Inner: 83-88 lb
Outer: 133-141 lb
H-S 590-H...

Inner: 80 lb @ 1.750 in.
Outer: 116 lb @ 1.812 in.
H-S 779-H...

Inner: 110 lb @ 1.938 in.
Outer: 143 lb @ 2.000 in.
Cummins engines...

TORQUE

189 lb @ 2 3/16 in.

Cylinder Head Bolt

 IHC RD-501
 100-110 lb-ft

 H-S 590-H
 140-160 lb-ft

 H-S 779-H
 210-220 lb-ft

 Cum engines
 430-450 lb-ft

BATTERY

Amp-Hour Capacity

All models 210 @ 20 hr (Models with Cummins engines use two batteries.)

Plates Per Cell

All models 21

Terminal Grounded

All models Neg

SAE Group No.

All models 8D

FRONT END

Toe-In

COMMERCIAL CAR JOURNAL, April, 1960

Camber (Positive)

All models 1 deg

Caster (Positive)

All models 3-4 deg

King Pin Slant

All models 5½ deg

CAPACITIES

Crankcase

IHC RD-501	9	qt
Н-Ѕ 590-Н	14	qt
Н-Ѕ 779-Н	20	qt
Cummins engines	28	qt

Transmission

A11	models							ı			i	30	pt
2811	modera	*	*	*		*	*	(4)	*	A	*	00	P

Rear Axle

A-50	01,	A-59	0	*		×	*	*	*		24	pt
All	oth	ers			×						30	pt

Cooling System

Models with	
IHC RD-501	54 qt
H-S 590-H	70 qt
Н-Ѕ 779-Н	
Cummins engines	74 qt

LUBRICATION

Crankcase

All models...Above 32 deg use SAE 30; Between 10 and 32 deg use SAE 20W; Below 10 deg use SAE 10W.

Transmission

All models... Use straight mineral gear oil. Above 32 deg use SAE 140; Between 0 and 32 deg use SAE 90; Below 0 deg use SAE 80.

Rear Axle

All models...Use Multi-purpose gear lube. Above 20 deg use SAE 140; Below 20 deg use SAE 90.

MODEL NUMBERS

Coach Model...Plate on center of dash.

Engine Model...Center digits of coach model number.

Rear Axle...Plate on axle.

CUT FLEET FUELING COSTS



FLEETMASTER

Printed record of fuel used by each vehicle

- Ends waste
- Prevents pilferage
- Shows maintenance needs before expensive trouble occurs

Traditional Bennett quality assures dependable operation at lowest cost. Available with Register and Totalizer in place of Ticket Printer. Remote control and heavy duty models available.

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Read what

Intrastate and Interstate Contract Carrier

WILLIAM P. BURSCH Owner, Bursch Trucking

4130 Edith, N. E.

Albuquerque, N. M.

has to say about the great new

"You just can't beat those full-ply Nygen bottoms for long trouble-free mileage. We're sold on the DCL!"

THE GENERAL TIRE & RUBBER CO. . Akron, Ohio

There's a Luber - Funct Model
For Every Type of Engine For Every Type of Oil



STANDARD & OPTIONAL EQUIPMENT ON LEADING TRUCK, TRACTOR & STATIONARY ENGINES

MODELS 78, 135-S, 200-S—single-bolt lid, screw-in type pack, overall compact design. Provide ultimate in filtration for passenger cars, small trucks, tractors—other similar engines up to 5-quart, 6-quart, and 7-quart crankcase capacities.

MODELS 272-C AND 363-C—single-bolt lid clamp, O-Ring lid gasket, screw-in type pack, rugged construction throughout. For heavy-duty service on gas, gasoline or diesel engines up to 3-gallon and 4-gallon crankcase capacities.

MODELS 500-C AND 750-C—single-bolt lid clamp O-Ring lid gasket, large-capacity packs, extra rugged construction for most severe service. For use on gas, gasoline or diesel engines up to 5-gallon and 8-gallon crankca;

capacities. Also on fuel lines, hydraulic oil systems, and other industrial applications.

MODELS 750-2C AND 750-3C — single bolt lid clamp, O-Ring lid gasket, multiple packs for extra large capacity. Either wall or floor mounts for industrial use on engines up to 35-gallon sump, fuel lines to 15 GPM, hydraulic oil systems to 450 gals. For larger capacities, two or more Units can be connected in parallel.

MODELS F-120-C AND F-155-C—for gasoline and diesel fuel lines on mobile, stationary, or marine applications. Extremely efficient in removing impurities and contaminants from fuel. Single Units handle flow rates from 1.0 to 2.0 GPM on suction or gravity flow. For larger capacities, two or more Units may be connected in parallel.

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GENUINE LUBER-FINER PACKS AVAILABLE IN TWO TYPES... DIESELPAK—Expressly designed and recommended for use with all detergent-type compounded oils. Has the ability to remove the most finely dispersed contaminants without removing or affecting the additives.

REFINING PACK—For use on straight mineral oil, synthetic oils, diesel fuel oil, hydraulic fluids, etc.

Genuine LUBER-FINER Model for Passenger Cars • Trucks • Tractors Stationary and Marine Engines Hydraulic Oil Systems and many Industrial Applications.

LUBER-FINER, INC., 2514 SOUTH GRAND AVENUE, LOS ANGELES 7. CALIFORNIA

FLXIBLE FLXIBLE-TWIN

ENGINES

Engine	Displace-		Bore &
Model	ment (cu in.)	Cyl	Stroke (in.)
FLXIBLE			
Fag FTC 200	451	6	43/8 x 5
GM 4-71	284	4	41/4 x 5
White 390 AD	531	6	43/4 x 5
GM 6-71 E	425.6	6	41/4 x 5
FLXIBLE-TWIN			
Fag FTC 180	404	6	41/4 x 43/4
Fag FTC 200	451	6	4% x 5

Oil Pressure

Engine

All Fageol engines...

45-55 psi @ 2400 rpm GM 4-71... 40 psi @ 2000 rpm GM 6-71E.... 25 psi minimum White 390AD...

45-55 psi @ 2400 rpm

Compression Pressure

Engine

Fag FTC 180...160 psi @ cranking speed

Fag FTC 200...155 psi @ 250 rpm GM 4-71...390 psi @ cranking speed

IGNITION

Cam Angle (Dwell)

All gas engines.... 31-37 deg

Breaker Point Gap

All Fag engines.. .018-.020 in. White 390 AD022 in.

Spark Occurs

(Degrees Before Top Center)

All Fag engines 2 deg White 390 AD 6 deg

SPARK PLUGS

Make & Type

All Fag engines CH J-5 White 390 AD CH 6 Com

Size

All Fag engines 14 mm White 390 AD 18 mm

Gar

All Fag engines020 in.
White 390 AD025 in.

VALVES

Operating Tappet Clearance

All Fag engines...Inlet: .015 in.

Exhaust: .018 in.

White 390 AD zero

Seat Angle

 All Fag engines
 45 deg

 White 390 AD
 45 deg

 GM engines
 30 deg

Face Angle

All Fag engines 45 deg White 390 AD 45 deg

TORQUE

Cylinder Head Bolt

All Fag engines... 85- 90 lb-ft GM engines 165-185 lb-ft

VALVE SPRINGS

Pressure

Valve Open

All Fag engines ...

132-141 lb @ 1 5/16 in.

White 390 AD... 175-185 lb @ 1.827 in. GM engines...

140 lb @ 1 51/64 in.

Pressure

Valve Closed

All Fag engines ...

64-71 lb @ 1 11/16 in. White 390 AD...

90-100 lb @ 21/4 in.

GM engines... 44 lb @ 2 3/16 in.

BATTERY

Amp-Hour Capacity

Bus Model

All Flxible models 160 All Flxible-Twin models . . 175

Plates Per Cell

All models 17

Terminal Grounded

All models Pos

FRONT END

Toe-In

All Flxible models..... 1/8 in.
All Flxible-Twin models...

1/16-0 in.

Camber

All Flxible models.. $1\frac{1}{2}$ -2 deg All Flxible-Twin models...

+1--1 deg

Caster (Positive)

All Flxible models.... 0 deg
All Flxible-Twin models...

134-114 deg

King Pin Slant

All models 5½ deg

CAPACITIES

Crankcase

Transmission

All Flxible models..... 13 pt All Flxible-Twin models. 17 pt

Rear Axle

Bus	Model

228 FI		20	pt
218 GM	II	23	pt
FT-30,	FT-33	23-31	pt
FT-35,	FT-40	31-30	pt

Cooling System

Bus Model

228	FI						*		*	×		*	64	qt
218	GM	П											58	qt
FT-3	0,	F	Γ-	3	3								63	qt
FT-3	15,	F	Γ-	4	0			*					66	qt

LUBRICATION

Crankcase

- All Fag engines...Above 70 deg use SAE 40; Between 45 and 80 deg use SAE 30; Between 15 and 55 deg use SAE 20; Between 0 and 25 deg use SAE 10.
- GM engines...Above 80 deg use SAE 30; Between 20 and 80 deg use SAE 20; Below 20 deg use SAE 10.

Transmission

- All Flxible models... Use SAE 50 mineral oil all year.
- All Flxible-Twin models ... Use SAE 140 mineral oil in Summer, SAE 90 in Winter.

Rear Axle

- All Flxible models... Use Military Spec 2-105-B all year.
- All Flxible-Twin models ... Use SAE 140 Extreme Pressure in Summer, 90 EP in Winter.



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Exchange Crankshafts give
Trouble-Free Operation
for the Full Life Cycle
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Great on production type equipment to engine manufacturer's specifications. Original stroke retained.

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a subsidiary of The Ohio Crankshaft Company

Bedford, Ohio

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Travel time and stopping time of trucks are permanently recorded on big, easy-to-read 6-inch charts. Choice of models for 1-day, 3-day or 7-day charts.

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Big 1-day or 3-day charts show speed, miles traveled, busy time, idle time, all stops, duration. Two models available:

MPH Model: Has 4 Push Buttons — a light glows if selected speed limit is exceeded. RPM Model: Has 2 Warning Lights. Red: RPM too low (lugging). Amber: too high.

Servis FUELOMETER

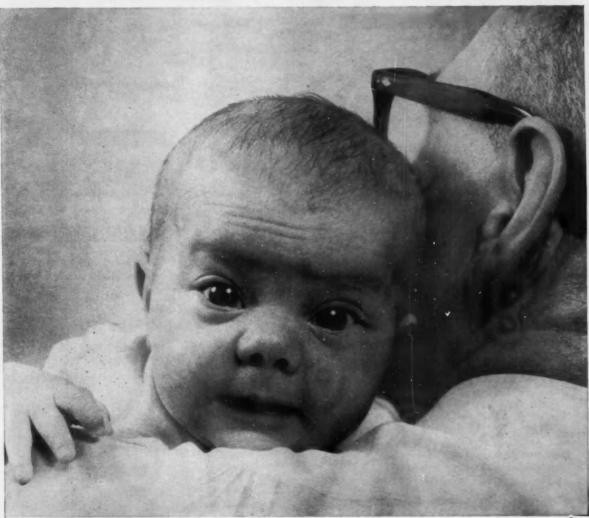


Measures gas that you actually get and use. Installs between fuel pump and carburetor. Records up to 9999.9 gals., then repeats.

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RAM CORPORATION, Providence 16, R. I.

√ Check Your Tune-Up

GENERAL MOTORS

ENGINES

Engine	Displace-		Bore &
Model	ment (cu in.)	Cyl	Stroke (in.)
270	270	6	3 25/32 x 4
4-71	284	4	41/4 x 5
6-71	426	6	41/4 x 5
6V-71	426	V-6	41/4 x 5

Oil Pressure

270 35-40 psi @ 1000 rpm Others...

25 psi minimum @ 1200 rpm

Compression Pressure

270	165 @	1000	rpm
4-71, 6-71	450 @	600	rpm
6V-71	475 @	600	rpm

IGNITION

Cam Angle

270 28-35 deg

Breaker Point Gap

Spark Occurs

(Degrees Before Top Center) 270 5 deg

SPARK PLUGS

Make & Type

270 AC 44 Com

Size

270 14 mm

Gap

Torque

270 15-20 lb-ft

VALVES

Operating Tappet Clearance

270		Inlet:	.012	in.
		Exhaust:	.020	in.
4-71	(Hot)		.009	in.
6-71	(Hot)		.024	in.
6V-7	1 (Hot)	0.13	015	in.

Seat & Face Angle

270Inlet & Exhaust: 30 deg 4-71, 6-71, 6V-71 30 deg

VALVE SPRINGS

Free Length

 270
 2½ in.

 4-71
 2¾ in.

 6-71, 6V-71
 1.95 in.

Pressure

(Valve Open)

TORQUE

Manifold

270 25-30 lb-ft

Cylinder Head

270 90-100 lb-ft 4-71, 6-71 165-175 lb-ft

BATTERY

Amp-Hour Capacity

TGH 3102 150
PD 4104 205
Others 175

Plates Per Cell

Terminal Grounded

TGH-3102, PD-4104 Pos All other models Neg

SAE Group

TGH 3102 ... 4D
PD 4104 ... 8D
Others ... 8G

FRONT END

Toe-In

All models 1/16-1/8

Camber

All models 1 deg

Caster

TGH 3102 4 deg Others 3 deg

King Pin Slant

CAPACITIES

Crankcase

TGH 3102 8 qt
TDH 3714 21 qt
PD 4104 29 qt
Others 26 qt

Transmission

TGH 3102 23 pt
TDH series 56 pt
TDM series 11 pt
PD 4104 21 pt

COMMERCIAL CAR JOURNAL, April, 1960

SDH	series									56	pt
SDM	series		*	*	*	*	×	*		11	pt
Rear	Axle										
TGH	3102									91/4	pt
TDH	3714,	45	51	2						20	pt
TDM	4515				*					20	pt
PD 4	104									18	nt

Cooling System

Others

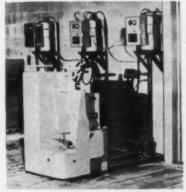
TGH 3102	28	qt
TDH 3714	61	qt
PD 4104	731/2	qt
Others	72	qt

LUBRICATION

Crankcase

- 270...Above 90 deg use SAE 30; Between 32 and 90 deg use SAE 20; Between 10 and 60 deg use SAE 10W; Below 10 deg use SAE 5W.
- 4-71, 6-71, 6V-71...Above 60 deg use SAE 30; Between 10 deg and 60 deg use SAE 20W; Below 10 deg use SAE 10W.

Space Saving Idea



Mount battery chargers, like this Exide Vertical Motor-Generator model, on the wall to save floor space. Shown is a custom-made metal bracket. Wood or reinforced plastics, which are strong enough to hold the weight, can be used. Companies can make mountings themselves or have them made to fit base dimensions. Exide Vertical Chargers come in four sizes and take about ½ less base area than horizontal models. They cover 25 different amp hr ratings for use with 6-18 cell batteries.









With the new Townsend Versa-Lockbolt* you get the same high tensile values as with the standard type but they cost less and are easier to install.

Wider grip ranges in a given size are provided by additional locking grooves. Other design changes make it feasible to use them in relatively oversized holes. Inspection time is reduced since hole size is less critical.

These features make for flexibility of design—make calculations simpler and more accurate.

Versa-Lockbolt installation is fast and guns provide uniform draw down or clinch—locking the collar with up to five tons of pressure. The new collar with its flanged integral washer makes it especially suitable for fastening even light gage materials.

For more information on how to get new vibration-proof fastening economy, write Townsend Company, Engineered Fasteners Division, P.O. Box 71-JJ, Ellwood City, Pa.

*Licensed under Huck patents RE 22,792, 2,114,493, 2,527,307 2,531,048, 2,531,049 and 2,754,703

Townsend Company

Engineered Fasteners Division

ELLWOOD CITY . PENNSYLVANIA

SOUTHERN

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl	Bore Stroke	
Fag-Ley FLDH-600	597	6	4 13/16	x 51/2
Fag-Ley FLDH-680	677	6	5	x 5%
Fag FTC-180	404	6	41/4	x 4%
Cum NHHB-600	743	6	51/8	x 6
Wau 6MZA	404	6	41/4	x 43/4

Oil Pressure

Engine

Fag-Ley FLDH-600...

60-70 lb @ 2100 rpm

Fag-Ley FLDH-680...

70 lb @ 1800 rpm Fag FTC-180...45 lb @ 2100 rpm

Cum NHHB-600...

30-50 lb @ 2100 rpm Wau 6MZA....40 lb @ 1500 rpm

Compression Pressure

Fag-Ley FLDH-600, FLDH-680... 450-475 psi @ 300 rpm with engine cold.

Fag FTC-180..160 psi @ 250 rpm Wau 6MZA...105 psi @ cranking speed.

IGNITION

Cam Angle (Dwell)

A	-		
			ne

Breaker Point Gap

Fag FTC-180 022 in. Wau 6MZA018 in.

Spark Occurs

Fag FTC-180...Top Dead Center Wau 6MZA....4 deg before TDC

SPARK PLUGS

Make & Type

Engine
Fag FTC-180......CH J5
Wau 6MZA......CH 8 Com

Size

Fag FTC-180...... 14 mm Wau 6MZA..... 18 mm

Gap

VALVES

Operating Tappet Clearance

(Hot unless noted)

Engine

Fag-Ley FLDH-600, FLDH-680... Inlet & Exhaust: .020 in. Cold Fag FTC-180 (Cold)...

> Inlet: .015 in. Exhaust: .018 in.

Cum NHHB-600 ...Inlet: .014 in. Exhaust: .027 in.

Wau 6MZA (Cold) ...

Inlet: .009 in. Exhaust: .020 in.

Seat Angle

 Fag-Ley engines
 30 deg

 Fag FTC-180
 45 deg

 Cum NHHB-600
 30 deg

 Wau 6MZA
 44½ deg

Face Angle

Fag-Ley engines 29½ deg
Fag FTC-180 45 deg
Cum NHHB-600 30 deg

TORQUE

Cylinder Head Bolt

Fag-Ley engines.. 155-160 lb-ft
Fag FTC-180.... 60-65 lb-ft
Cum NHHB-600.. 450 lb-ft
Wau 6MZA 75 lb-ft

VALVE SPRINGS

Valve Open Length

Fag-Ley engines..Inner: 1.230 in.
@ 134 lb pressure; Outer:
1.481 in. @ 134 lb pressure.
Fag FTC-180...

1 5/16 in. @ 132-141 lb Cum NHHB-600...

1 27/32 in. @ 104-114 lb. Wau 6MZA...1 21/32 in. @ 101 lb

Valve Closed Length

Fag-Ley engines..Inner: 1.731 in. Outer: 1.981 in.

Fag FTC-180 ...

1 11/16 in. @ 64-71 lb

Cum NHHB-600...

21/4 in. @ 74-82 lb

Wau 6MZA...2 11/32 in. @ 64 lb

BATTERY

Amp-Hour Capacity

Bus

S-45-DHC 200 All others 168

Plates Per Cell

Bus

Terminal Grounded

All models Pos

FRONT END

Toe-In

All models 1/8-1/16 in.

Camber (Positive)

All models 1½ deg

Caster (Positive)

All models 1 deg

King Pin Slant

All models 51/2 deg

CAPACITIES

Crankcase

Fag-Ley engines	26 qt
Fag FTC-180	12 qt
Cum NHHB-600	32 qt
Wau 6MZA	15 qt

Transmission

Capacity given is for mechanical section of hydraulic transmission only.

S-45-DHC						*		6	pt
All others			*					31/2	pt

Rear Axle

S-36							*			23	pt
S-41										31	pt
S-45										30	pt

0001	ing 3	y	-	ı	•	4	в						
S-45-	DHC											84	qt
All o	thers								*		*	72	qt

LUBRICATION

Crankcase

Wau 6MZA...Above 70 deg use SAE 40W; Between 50 and 70 deg use SAE 30W; Between 30 and 50 deg use SAE 20W; Below 30 deg use SAE 10W.

Cum NHHB-600...Above 80 deg use SAE 30W; Between 20 and 80 deg use SAE 20W; Below 20 deg use SAE 10W.

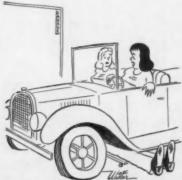
All others...Between 50 and 70 deg use SAE 30W; Between 30 and 50 deg use SAE 20W; Below 30 deg use SAE 10W.

Transmission

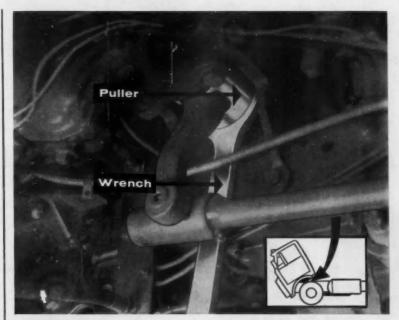
All models... Use SAE 50 in mechanical section of hydraulic transmissions.

Rear Axle

All models . . . SAE 140 hypoid gear lube.

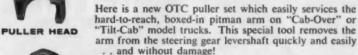


I just reme We'd better floor boards in this



NEW, easy way to remove pitman arms on "Cab-Over" model trucks







Set includes two puller bodies for various pitman arms, and three special puller hex nuts to fit the steering gear levershaft thread size. Any appropriate size wrench will turn the hex nut which transmits power to the puller.

SAVE TIME AND MONEY WITH THIS

NEW SPECIAL OTC PULLER SET

OTHER SPECIAL OTC PITMAN ARM SERVICE TOOLS

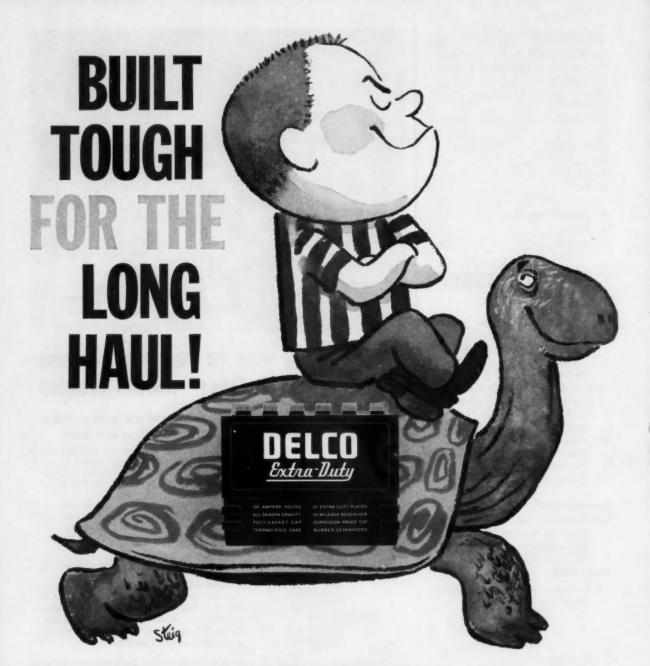


PITMAN ARM PULLER-Rugged tool makes an easy job of pulling standard truck pitman arms, other than "Cab-Over" models; also works on most autos including Ford, Chevrolet, Plymouth, Buick, Dodge, Pontiac, Oldsmobile, and DeSato. Can also be used to pull older model Ford wheel hubs.

PITMAN ARM WEDGE-Popular OTC tool for removing pitman arms on all passenger cars and some light trucks. Wedge end is placed between the parts to be separated—a few sharp hammer blows on the wedge handle will separate the parts.

See your OTC distributor about these time-saving tools.





Turtles and Delco Extra-Duty batteries have two things in common—rugged construction and long life. That's why the Extra-Duty is tops with profit minded fleet owners. ■ This battery was specially built to take the punishment of rough fleet use. Heavy-duty plates and grids, rubber separators, protected connectors and all hard-rubber case add up to more miles on the road and more money in the bank. The Extra-Duty is dry charge. 100% Fresh Power. Power that will protect the profits of your fleet. ■ See your U-M-S supplier for Delco Extra-Duty batteries and other fine replacement parts.

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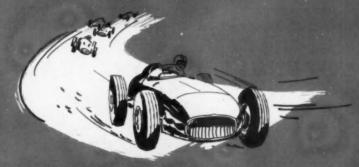


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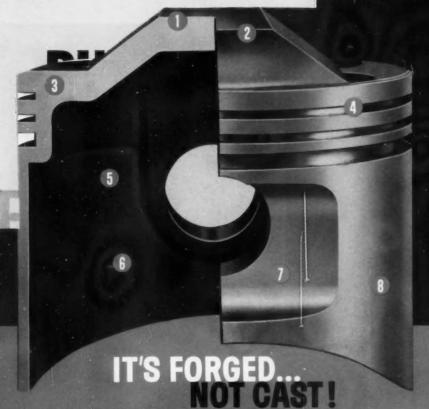
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from.

Thompson Products Light Metals Division
Thompson Ramo Wooldridge Inc.



PROVED IN THE INDIANAPOLIS "500" Many cars in the Indianapolis "500" Race were equipped with Thompson's impact extruded aluminum pistons of standard specifications. Not one of these cars was forced out of the race because of piston failure. And five were money winners! This forged piston was the only certified piston at the 1959 "500".



A NEW IMPACT EXTRUSION PROCESS—exclusive with Thompson Products—exerts tremendous pressures while literally ramming aluminum slugs into pistons. This forging process creates a new, dense grain flow in the metal without adding weight. As a result, Thompson's forged piston is up to 70% stronger than conventional cast pistons. Other major advantages are listed at right and illustrated in cutaway above. in cutaway above.

for more details. write to ...



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For the complete story on Parish heat-treated alloy siderails, write for the interesting, illustrated booklet—"Load and the Road." Commercial vehicles — from off-theroad loggers to transcontinental vans —are being designed to carry heavier loads farther at a faster pace. And the BIG FACTOR that means longer life for many of these vehicles is extra-strength Parish siderails.

Parish alloy steel siderails are 277% stronger than ordinary carbon steel. Made of heat-treated chrome manganese molybdenum steel, they're the finest combination of modern materials and design know-how. They mean

extra strength without extra weight.

Parish siderails absorb shock better, hold their shape better, than do conventional siderails. Misalignments caused by frame warping are almost non-existent. Drive train components last longer. Maintenance costs and downtime are reduced.

That's why some 30 leading truck and trailer manufacturers are now designing their vehicles around Parish heat-treated siderails—the extra strength siderails that stay aligned.

● DANA PRODUCTS: Transmissions ● Universal Joints ● Propeller Shafts ● Axles ● Torque Converters ● Geor Boxes ● Power Take-Offs ● Power Take-Off Joints ● Rail Car Drives ● Railway Generator Drives ● Stampings ● Spicer and Auburn Clutches ● Parish Frames ● Forgings.



ALLIS-CHALMERS

ENGINES

Engine Model	Displace- ment (cu in.)	Cyl	Bore & Stroke (in.)
G-138	138	4	33/8 x 37/8
G-149	149	4	3½ x 3%
G-226	226	4	4 x 4½
6 B-230	229.7	6	3 7/16 x 41/8
6 B-273	273	6	33/4 x 41/8
Diesels			
D-344	344	4	4 7/16 x 5 9/16
6 DA-273	273	6	33/4 x 41/8
D-516	516	6	4 7/16 x 5 9/16
16000	844	6	51/4 x 61/2
21000	844	6	51/4 x 61/2

Oil Pressure

Englae

2075 rpm G-226...10-20 psi @ 1950-2000 rpm 6 B-230...20 psi @ 1600 rpm 6 B-273...20 psi @ 1800 rpm 344...45 psi @ 1200 rpm 6 DA-273...15-25 psi @ 1400 rpm D516...45 psi @ 1200 rpm 16000, 21000...55 psi @ 1400 rpm

G-138, G-149...10-20 psi @ 1975-

Compression Pressure

Engine

G-138...180 psi @ 310 rpm G-149...175 psi @ 300 rpm G-226...170 psi @ 300 rpm D-344, D-516...425 psi @ 600 rpm 6DA-273...390 psi @ 600 rpm 16000, 21000...470 psi @ 600 rpm

IGNITION

Cam Angle

G-138, G-149, G-226.. 180 deg

Breaker Point Gap

G-138, G-149, G-226 .020 in. Other models018-.024 in.

Spark Occurs

(Degrees Before Top Center) G-138, G-149, G-226... 25 deg Other models...Mark on flywheel

SPARK PLUGS

Make & Type

G-138, G-149...

AC C45, CH J8, AL A7
G-226..... AC 45XL, CH N-8
Other models CH J11

Size

All gasoline engines . . 14 mm

Gap

G-138, G-149, G-226...023-.028 in. Other models025 in.

Torque

G-138, G-149, G-226....25-30 lb-ft Other models 30 lb-ft

VALVES

Operating Tappet Clearance

(Hot unless noted) G-138, G-149, G-226...

Inlet & Exhaust: .012-.014 in. 6 B-230, 6 B-273...Inlet: .010 in. Exhaust: .012 in. D-344, D-156Inlet: .016 in.

Exhaust: .020 in.
6 DA-273Inlet: .010 in.
Exhaust: .012 in.

16000, 21000...

Inlet & Exhaust: .015 in.

Seat Angle

G-138, G-149...

Inlet & Exhaust: 45 deg G-226Inlet: 30 deg Exhaust: 45 deg

All diesels...

Inlet & Exhaust: 45 deg

Face Angle

G-138, G-149...

Inlet & Exhaust: 45 deg G-226Inlet: 30 deg Exhaust: 45 deg

All diesels...

Inlet & Exhaust: 45 deg

TORQUE

Manifold

G-138, G-149 (Minimum)...
Inlet & Exhaust: 25 lb-ft
G-226 (Minimum)...
Inlet & Exhaust: 35 lb-ft

Inlet & Exhaust: 35 lb-ft 16000Inlet: 45-50 lb-ft 21000Inlet: 45 lb-ft

Cylinder Head Bolt

G-138, G-149

(Min.) 80 lb-ft 6 B-230, 6 B-273. . 95-105 lb-ft G-226. . . 7/16 in. thread: 70- 75 lb-ft

1/16 in. thread: 70-75 lb-ft
1/2 in. thread: 90- 95 lb-ft
6 DA-273 95-105 lb-ft
All other diesels...

½ in. thread: 95-105 lb-ft
% in. thread: 180-190 lb-ft

VALVE SPRINGS

Free Length

G-138, G-149, G-226...

Inlet & Exhaust: 2 5/16 in. 6 B-230, 6 B-273...

Inlet & Exhaust: 2 3/32 in. D-344...

Inlet & Exhaust: 2 21/32 in. 6 DA-273...

Inlet & Exhaust: 2 1/32 in. 16000, 21000...

Inlet-Inner: 2 35/64 in.

Outer: 25% in.

Exhaust: 31/4 in.

Pressure

G-138, G-149, G-226...

65-75 lb @ 1 7/16 in. 6 B-230, 6 B-273...

122-131 lb @ 1 13/32 in.

COMMERCIAL CAR JOURNAL, April, 1960

New St. Louis Terminal for T.I.M.E.

This is an artist's conception of the new St. Louis, Mo., terminal now under construction for T.I.M.E., Inc., Lubbock, Tex. Located on a 10¼ acre site, the new facility features an 80 x 284 ft dock area with built-in dragline, a large office and maintenance shop, and a completely paved and lighted parking area.



D-344..155-165 lb @ 1 13/16 in. 6 DA-273...

86-92 lb @ 1.412 in.

Inlet-Inner:

35- 39 lb @ 1 24/64 in.

Outer:

69- 75 lb @ 1 29/64 in.

Exhaust:

145-155 lb @ 2 3/16 in.

CAPACITIES

Crankcase

G-138, G-149	4 q
G-226, 6 B-230, 6 B-273	6 q
D-344	11 q
6 DA-273	6 q
D-516	16 q
16000, 21000	22 q

LUBRICATION

Crankcase

G-138, G-149...Above 90 deg use SAE 30; Over 32 deg use SAE 20W; Below 32 deg use SAE 10W.

G-226...Above 90 deg use SAE 40; Above 32 deg use SAE 30; Above 10 deg use SAE 20W; Below 10 deg use SAE 10W.

6 B-230, 6 B-273...Above 90 deg use SAE 40; Between 32 and 90 deg use SAE 30; Below 32 deg use SAE 20.

D-344...Over 90 deg use SAE 40; Between 32 and 90 deg use SAE 30; From 0 to 32 deg use SAE 20W; Below 0 deg use SAE 10W.

6 DA-273, 16000, 21000...Between —10 and 32 deg use SAE 20; Between 32 and 90 deg use SAE 30; Above 90 deg use SAE 40.



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IN ALLOWANCE FOR YOUR OLD CHANGER . . . NO PAD IN PRICE)

Canada Vulcanizer and Equipment Co., London, Ont.

STATE

TITLE

√ Check Your Tune-Up

CONTINENTAL

ENGINES

Engine	Displace-		Bore &
Model	ment (cu in.)	Cyl	Stroke (in.)
F4124	124	4	3 3/16 x 43/8
F4162	162	4	3 7/16 x 43/8
F6186	186	6	3 x 43/8
F6209	209	6	3 3/16 x 43/8
F6226	226	6	3 5/16 x 43/8
M6271	271	6	35/8 x 43/8
M6290	290	6	33/4 x 43/8
K6330	330	6	4 x 43/8
M6330	330	6	4 x 43/8
B6371	371	6	41/8 x 45/8
T6371	371	6	4½ x 45%
B6427	427	6	4 3/16 x 47/8
T6427	427	6	4 5/16 x 47/8
U6501	501	6	41/2 x 51/4
R6513	513	6	4½ x 5%
R6572	572	6	43/4 x 53/8
R6602	602	6	47/8 x 53/8
V8603	603	8	4¾ x 4¼
S6749	749	6	5% x 5½
S6820	820	6	5% x 5½
Diesels			-76 - 72
SD6802	802	6	5 9/16 x 5½
TD6427	427	6	4 5/16 x 47/8
RD6572	572	6	4% x 5%
VD8603	603	8	4% x 41/4

Oil Pressure

F6226	30-40 psi
Other F-series	35-40 psi
B, K & M series	40-50 psi
T series	40-60 psi
R, S & U series	55-65 psi
V860350 psi @	3000 rpm
SD6802	55-65 psi
TD6427	40-50 psi
RD6572	40-60 psi
VD860350 psi @	3000 rpm

Compression Pressure

(At cranking speed)		
R, S & U series	120	psi
Other gasoline engines	115	psi
Diesels	375	psi

SPARK PLUGS

Size									
V8603								14	mm
All othe								18	mm

Gap

A 22		
All	models	 .025 in.

VALVES

Operating Tappet Clearance

F seriesInlet:	.014	in.
Exhaust:	.014	in.
M seriesInlet:	.017	in.
Exhaust:	.020	in.
K & T series Inlet:	.018	in.
Exhaust:	.022	in.
B seriesInlet:	.017	in.
Exhaust:	.022	in.
U6501Inlet:	.016	in.
Exhaust:	.024	in.
R seriesInlet:	.018	in.
Exhaust:	.024	in.
S seriesInlet:	.020	in.
Exhaust:	.024	in.
V8603Inlet:	.020	in.
Exhaust:	.028	in.

RD6572		.020	in.
	Exhaust:		
SD6802		.020	in.
	Exhaust:	.024	in.
TD6427		.018	in.
	Exhaust:	.022	in.
VD8603	Inlet:	.022	in.
	Exhaust:	.024	in.

VALVE SPRINGS

Pressure	
(Valve Open)	
F4124, F4162	
100 lb @ 1 27/64	in.
Other F series	
103-110 lb @ 1%	in.
M series119 lb @ 1.521	in.
B series144 lb @ 1.316	in.
T series	
Inner: 61 lb @ 1.016	in.
Outer: 130 lb @ 1.110	in.
R6513, R6602	
Inner: 90 lb @ 1.367	in.
Outer: 160 lb @ 1.617	in.
R6572173 lb @ 1.750	in.
S series	
Inner: 100 lb @ 2.031	in.
Outer: 200 lb @ 2.188	in.
V8603	
Inner: 120 lb @ 1.359	in.
Outer: 179 lb @ 1.609	in.
SD6802204 lb @ 2.063	in.
TD6427	
Inner: 100 lb @ 2.031	in.
Outer: 130 lb @ 1.110	in.
Inner: 61 lb @ 1.016	
RD6572173 lb @ 1.750	

TORQUE

VD8603185 lb @ 1.688 in.

Cylinder Head Bolt

V8603, VD8603100-110 lb-ft All others...

% in. thread: 35- 40 lb-ft 7/16 in. thread: 70- 75 lb-ft ½ in. thread: 90-100 lb-ft 9/16 in. thread: 130-140 lb-ft % in. thread: 145-155 lb-ft



Better products, faster, from your Federal-Mogul jobber:



Operators who watch costs replace with Federal-Mogul engine bearings!



Sintered copper-alloy engine bearings help fleet owners clock more miles between overhauls

Federal-Mogul sintered engine bearings—marvels in design and research—produced by a patented process, deliver a big bonus in extra fleet mileage. Replacements supplied for the exact engine application by your Federal-Mogul jobber result in a top-notch overhaul job and real operating economy. In all Federal-Mogul bearings, you can be sure of quality control which insures balanced oil flow and "throw-off" between bearings and shaft for proper engine lubrication and like-new performance. Your Federal-Mogul jobber is always ready to give you fast, dependable delivery from thousands of types and sizes whenever you need bearings.

FEDERAL-MOGUL ENGINE BEARINGS

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC. . DETROIT 13, MICHIGAN



NH-250, NT-380 325 lb-ft All others430-450 lb-ft

CUMMINS

ENGINES

Engine	Displace-		Bore	&
Model	ment (cu in.)	Cyl	Stroke	(in.)
J-4	267	4	41/8	x 5
C-90, C-105	309	4	4 7/16	x 5
J series	401	6	41/8	x 5
C-160, C-175	464	6	4 7/16	x 5
HRC-4, NHC-4	495	4	51/8	x 6
NT-4, NT-180, NT-200	495	4	51/8	x 6
H-6, HS-6	672	6	47/8	x 6
NH-180, NH-195	672	6	47/8	x 6
NHE-180, NHE-195	743	6	51/8	x 6
NH-220, NHS-6, NHRS-6	743	6	51/8	x 6
NT-6, NTO-6, NRT-6	743	6	51/8	x 6
NRTO-6, NRTO-355	743	6	51/8	x 6
NFT-6	743	6	51/8	x 6
H series	743	6	51/8	x 6
NH-250, NT-380, NT-420	855	6	51/2	x 6

Oil Pressure

All models...30-50 psi @ governed speed

VALVES

Operating Tappet Clearance

(With oil temperature @ 140 deg) Exhaust: .025 in. HRS, HSInlet: .016 in. Exhaust: .028 in. H, HR, HRC Inlet: .014 in. Exhaust: .022 in.

NH-250, NT-380 ... Inlet: .014 in. Exhaust: .027 in.

Other NH series .. Inlet: .014 in. Exhaust: .027 in.

NR, NRT, NRTO.. Inlet: .014 in. Exhaust: .027 in.

Seat Angle

All modelsInlet: 30 deg Exhaust: 30 deg

Face Angle

All models 30 deg

TORQUE

Cylinder Head Bolt

J series11/16: 300 lb-ft 3/4: 400 lb-ft

VALVE SPRINGS

Free Length

J, JF, JS	2.884 in
JN, JNS, JT	2.364 in
H series	3.484 in
NH-220	3.160 in
NH-250, NT-380	3.230 in
Other NH series	3.313 in

Pressure	
J, JF, JS178 lb @ 1.940	in.
JN, JNS, JT .111 lb @ 1.610	in.
H series 179-198 lb @ 2 3/16	in.
NH-220	
104-114 lb @ 1 49/64	in.
NH-250, NT-380	
110-120 lb @ 1 49/64	in.
Other NH series	
104-114 lb @ 1 27/32	in.

CAPACITIES

Crankcase

J-4	13 qt
Other J series	16 qt
NT-180, C-160, C-175	16 qt
C-90, C-105	13 qt
Other	28 qt

LUBRICATION

All models...Above 90 deg use SAE 30; Between 32 and 90 deg use SAE 20; Below 32 deg use SAE 10W



Quick Clean-Up

Installed for the Carnation Co., Los Angeles, is this truck washing system from the California Car Wash systems, Inc., N. Hollywood, Cal. Small trucks can be handled in as little as 45 seconds, 40-ft trucks take one and a half minutes.



NEWS for Fleet Operators

HOLLEY CARBURETOR COMPANY

WARREN . MICHIGAN

New HOLLEY Carburetors Can be Serviced White an the Engine

Newly designed Holley two and four barrel carburetors will reduce ordinary carburetor service to the time required to remove and replace a single spark plug. All minor repair—90% of carburetor service requirements under 30,000 miles—can be completed without removing the carburetor from the engine. Details of these simple service steps are shown below. In addition, pump, metering, and choke systems and fuel floats may be serviced while the carburetor is on the engine.

External Fuel Level Adjustment

- A. Check the fuel pump pressure before altering the fuel level. (Correct as necessary.)
- B. With air cleaner removed and ignition off, remove the float bowl lower attaching screw farthest from the fuel inlet Fig. 1.
- C. Drain the gasoline in a shallow pan purging the carburetor bowl of dirt and sludge.



Figure 1

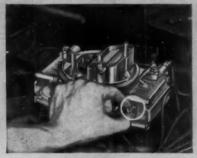


Figure 2

CAUTION: Care should be taken at all times against the danger of gasoline spillage and fire hazard!

- D. Reinstall bowl screw.
- E. With the car on a level surface and the engine running, remove the sight plug (Figure 2), the fuel level should be on line with the threads at the bottom of the sight plug port. (+ or 1/16" tolerance.)
- F. To adjust the fuel level, loosen the lock screw slightly with a ½" wrench and turn the adjusting nut with a ½" wrench. Turn nut clockwise to lower fuel level and counterclockwise to raise fuel level (½ turn equals approximately 18" in fuel level). Fig. 3.
- G. After adjustment, tighten lock screw.
- H. Operate engine until fuel level is stabilized then re-check level at sight plug.
- If necessary, repeat steps "E" and "F" until proper fuel level is attained.
- J. Replace sight plug.

TO ADJUST THE FUEL LEVEL IN THE SECONDARY BOWL FOLLOW THE ABOVE PROCEDURE.

Inspection and Replacement of Needle and Seat

- A. Loosen lock screw.
- B. Turn the adjusting nut counterclockwise until the threads are disengaged.

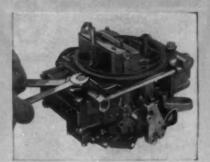


Figure 3

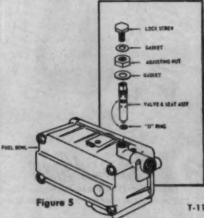


Figure 4

C. Remove the needle and seat assembly. Fig. 4. Disassemble as necessary.

Installation Fig. 5.

- A. Always use new gaskets and "O" rings.
- B. Lubricate "O" rings and install carefully in passage. Follow adjustment procedure outlined in External Fuel Level Adjustment.

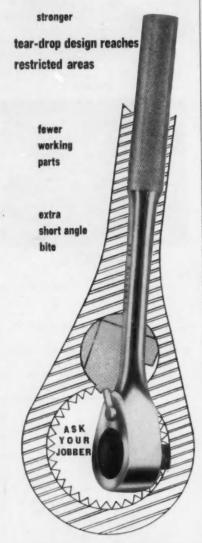


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erbrand Tools

THE BINGHAM-HERBRAND CORPORATION FREMONT, OHIO

√ Check Your Tune-Up

DEUTZ

ENGINES

Engine	Displace-		Bore &
Model	ment (cu in.)	Cyl	Stroke (in.)
F4L 514	324.6	4	43% x 51/2
F6L 514 (in line)	486.9	6	43/8 x 51/2
F6L 614	486.9	V-6	4% x 5½
F8L 614	649.2	V-8	4% x 5½
F12L 614	973.8	V-12	43% x 51/2
F3L 712 (in line)	156	3	33/4 x 43/4
F4L 712 (in line)	208	4	3¾ x 4¾
F6L 712 (in line)	312	6	33/4 x 43/4
F6L 714	578.5	V-6	43/4 x 51/2
F8L 714	771.3	V-8	43/4 x 51/2
F12L 714	1151	V-12	43/4 x 51/2
F3M 716	420	3	5 5/16 x 6 5/16
F4M 716	560	4	5 5/16 x 6 5/16
F6M & BF6M 716	840	6	5 5/16 x 6 5/16
F12M & BF12M 716	1680	V-12	5 5/16 x 6 5/16

Oil Pressure

All models ...

60 psi @ 2000 rpm

Compression Pressure

(At 80-100	rpn	n)			
514, 614 seri	ies		 * *	 300	psi
712 series .			 	 475	psi
714 series .			 	 450	psi
716 series .				 350	psi

VALVES

Operating Tappet Clearance

716 series (Cold)...

Inlet: .012-.014 in. Exhaust: .018-.020 in.

All others ...

Inlet & Exhaust: .004-.008 in.

Seat Angle

All models 45 deg

Face Angle

All models 45 deg

TORQUE

Manifold Bolt

All models 70 lb-ft

CAPACITIES

Crankcase

F4L	514						*	,	×			14.4	qt
F6L	514				*			*	×			25.6	qt
F6L	614,	F	6L		7	1	4		*			26.4	qt
F8L	614,	F	BL	ľ	7	1	4			*		26.4	qt
F12I	614								*			36	qt
F12I	714							*				39.2	qt
F3L	712					*						8.4	qt
F4L	712						*	*				10.6	qt
F6L	712											13.6	qt
F3M	716				×			×.			*	19	qt
F4M	716						*		*			33	qt
F6M	& B	F6	M	7	71	6	,					47	qt
F12	M &	BF	12	N	1	7	1	6	,			85	qt

LUBRICATION

716 series...Use SAE 30 in Summer, SAE 20 or 20W in Winter. Below 10 deg use SAE 10W.

All others...Use SAE 30 in Summer, SAE 20 or 20W in Winter. Below —4 deg use SAE 10W.

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✓ Check Your Tune-Up

GM DIESEL

ENGINES

Engine	Displace-		Bor	e	&
Model	ment (cu in.)	Cyl	Stroke	(in.)
"53" Series					
5037	159.2	3	37/8	x	41/2
5047	212.3	4	37/8	x	41/2
5067	318.4	V-6	37/8	x	41/2
"71" Series					
3172, 3174	212.8	3	41/4	x	5
4171, 4172, 4174	283.7	4	41/4	x	5
4171E*, 4172E*, 4174E*	283.7	4	41/4	x	5
4171T*	283.7	6	41/4	x	5
6174	425.6	6	41/4	x	5
6171E*, 6171T*	425.6	6	41/4	x	5
6172E*, 6173T*, 6174E*	425.6	6	41/4	x	5
7067*	425.6	V-6	41/4	x	5
7087*	567.4	V-8	41/4	x	5
"110" Series					
62306	660	6	5	x	5.6
* 4 valve head models					

Oil Pressure

"53"	series					40-50 psi	ı
"71"	series					30-60 psi	i
"110"	series		*	*		35-60 psi	

Compression Pressure

(Min	imum at sea l	evel)		
"53"	series		475	psi
"71"		-valve:		
	4	-valve:	420	psi
"110"	series		500	psi

VALVES

Operating Tappet Clearance

(Hot) "53" series	2-valve:	000 :-
oo series		
	4-valve:	.024 in.
"71" series	2-valve:	.009 in.
	4-valve:	.024 in.
"110" series		.009 in.
Seat Angle		
All models		30 deg

Face Angle All models 30 deg

VALVE SPRINGS

Free length

"53"	series	2-valve:	2.5	in.
		4-valve:	2.08	in.
"71"	series	2-valve:	2.375	in.
		4-valve:	1.95	in.
"110"	' series		3.03	in.

Pres	sure					
"53"	series, 2-va	lv	е.			
	133-14	9	lb	@	1.91	in.
"53"	series, 4-v	alv	7e.			
	104-11	0	lb	@	1.527	in.
"71"	series, 2-va	lv	e			
	1411/2-1501	4	lb	@	1.7656	in.
"71"	series, 4-vs	lv	e			
	841/2-891	6	lb	@	1.416	in.
"110"	series					
	191-20)1	lb	@	2.48	in.

TORQUE

Cylinder Head Bolt

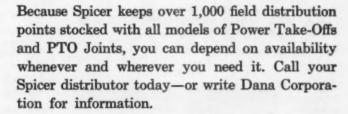
"53"	series		170-180	lb-ft
"71"	series	Bolt:	180-190	lb-ft
		Nut:	165-175	lb-ft
"110"	series	.Nut:	150-160	lb-ft

Manifold Nut

All models		30-35	lb-ft
------------	--	-------	-------



You Need
Is Available
Right Now!





DANA CORPORATION . DEPT. 85 . TOLEDO 1, OHIO

Products offered by Dana: Spicer and "Mechanics" Type Universal Joint Replacement Kits • Spicer Universal Joints and Drive Lines • Spicer Transmissions, Clutches and Axles • Auburn Clutches • Monmouth Clutch Plates • Spicer Power Take-Offs and PTO Industrial and Agricultural Joints



- Adds to Bearing Life
- Decreases Maintenance
- Reduces Down-Time
- Fleet-Proved

Any way you look at it—dependability or cost—C/R oillubrication of trailer wheel bearings brings you many economies. (1) No more grease repacks—oil lasts from one brake reline to the next. (2) No burned-out bearings due to postponed repacking. (3) Less drag, lost power, and fuel wastage, because the SAE-30 oil remains freeflowing winter and summer. (4) More complete protection for brake linings against lubricant leakage.

Ask your C/R Supplier to show you the new C/R SCOTSEAL Kit* and the ingenious SCOTSEAL Installation Tool* that makes installation fast and simple. Here's a real money-saver in trailer operation. Don't put off a test application.

Installation is as easy as repacking and just as fast!

FREE FOLDER NOW READY

For complete information on the only conversion kit that permits the use of SAE-30 oil, ask your C/R Supplier for this new, free folder. Or, if you prefer, we'll be glad to mail direct.



*Patents Applied For.

SEAL OF PROVED PERFORMANCE



CHICAGO RAWHIDE

SERVICE SALES DIVISION



For any engine (including aluminum) Allied gives you the right insert!

• In your business, there's only one right valve seat insert for an engine... the one that exactly matches original equipment specifications for material.

That's why Allied supplies inserts in all four materials commonly used in original equipment. In short, you can duplicate the inserts you're replacing . . . with Allied.

The full-coverage Allied insert line already has been expanded to include inserts made of chrome nickel alloy and designed for use in aluminum engines . . . as well as inserts in chrome cobalt alloy, chrome molybdenum alloy and molybdenum alloy.

Each Allied insert is produced from an individual casting to guarantee perfect fit and uniform grain structure . . . two Allied

assets that will show up in your service records as a dividend of longer, better service.

In short, don't gamble by compromising on valve seat insert materials. Match the material you're replacing . . . with Allied.

ALLIED AUTOMOTIVE PARTS COMPANY INDIANAPOLIS 7, INDIANA



√ Check Your Tune-Up

HERCULES

ENGINES

Engine	Displace-		Bore &
Model	ment (cu in.)	Cyl	Stroke (in.)
ZXB	65	4	25/8 x 3
C2-90D	90	2	4 x 3½
IXB	133	4	31/4 x 4
IXLB	141	4	31/4 x 41/4
GO-149	149	3	33/4 x 41/2
GO-169	169	3	4 x 4½
CV4-180	180	4	4 x 3½
GO-198	198	4	3¾ x 4½
GO-226	226	4	4 x 4½
QXLD-3	237	6	3 7/16 x 41/4
JXC	282	6	3¾ x 4¼
GO-298	298	6	3¾ x 4½
JXD	320	6	4 x 4½
JXLD	339	6	4 x 4½
GO-339	339	6	4 x 4½
Diesels			
DD-149	149	3	3¾ x 4½
DD-169	169	3	4 x 4½
DD-198	198	4	33/4 x 41/2
DD-226	226	4	4 x 4½
DD-298	298	6	33/4 x 41/2
DJXH	298	6	33/4 x 41/2
DD-339	339	6	3¾ x 4½
DRXC	529	6	45/8 x 51/4
DFXE	895	6	55% x 6
DFXH	935	6	53/4 x 6

Oil Pressure

ZXB 18 C2-90, CV4-180.		@	1000	rpm
		@	1800	rpm
IXB, IXLB2	psi 0	@	1000	rpm
Go series3	2 psi	@	1200	rpm
JX series2	6 psi	@	2000	rpm

JX	series26	psi	@	2000	rpn
DD	series32	psi	@	1200	rpn
DR	XC30	psi	@	2000	rpn
DJY	K series45	psi	@	2000	rpn
DE	X series 50	nsi	(0)	1600	FDD

VALVES

Operating Tappet Clearance

(Hot unless noted)	
ZXB	Inlet: .006	in.
E	khaust: .006	in.
C2-90, CV4-180 (C	old)	
Inlet & Exhau	st: .005007	in.
IX OX series	Inlet : 006	in

	Exhaust:	.008	in.
JX series	Inlet:	.008	in.
	Exhaust:	010	in

GO series, JXLD...

~~		,	-			
	I	nlet	&	Exhaust:	.010	in
DD,	DJX	seri	ies			

Inl	et &	& Exhaust:	.010	in
DRXCInle	et &	Exhaust:	.016	in
DFX series		Inlet:	.010	in
		Exhaust:	.016	in

Seat Angle

C2-90, CV4-180Inlet:	30	deg
Exhaust:	45	deg
JX, GO series		
Inlet & Exhaust:	45	deg
Other gasoline engines		
Inlet & Exhaust:	30	deg
All diesel engines		

VALVE SPRINGS

Inlet & Exhaust: 45 deg

Pressure

(Valv	re	0	P)€	er	1))						
ZXB									35	lb	@	0.922	ir

C2-30, C V 4-100				
76-84	lb	@	1.18	in.
IX series42	lb	@	1.188	in.
GO series				
Inner: 32-36	lb	@	1.08	in.
Outer: 46-52	lb	@	1.20	in.
JX series58	lb	@	1.594	in.
QX series41	lb	0	1.281	in.

C2-90 CVA-180

-			-	-		
DD	series					
	Inner:	32-36	lb	@	1.08	in.
	Outer:	46-52	lb	@	1.20	in.
DIV						

DJX	series					
	Inner:	37	lb	@	1.281	in.
	Outer:	55	1b	@	1.406	in.

	Outer:	99	ID	w	1.406	ın.
DRX	series					
	Inner:	30	lb	@	1.355	in.
	Outer:	48	1h	0	1.499	in

	Outer:	40	ID	W	1.433	ın.
DFX	series					
	Inner:	57	lb	@	2.656	in.
	Outer:	94	lb	@	2.969	in.

IGNITION

Breaker Point Gap

A11	models	 .018020	in.

Spark Occurs

All models.....Mark on flywheel

TORQUE

Cylinder Head Bolt

ZXB	35	ID-IT
C2-90, CV4-180	20	lb-ft
IX series	40	lb-ft
GO series	140	lb-ft
JX series	75	lb-ft
QX series	60	lb-ft
DRX series		
% in. thread:	175	lb-ft
1 in. thread:	280	lb-ft
DD series	140	lb-ft
Other diesels	158	lb-ft

CAPACITIES

Crankcase

ZXB		3	qt
C2-90	* * *	4	qt
IX series		51/2	qt
GO 149, 169		5	qt
CV4-180		5	qt
GO 198, 226		51/2	qt
QX series		6	qt
JXD, JXLD		81/2	qt
GO 298, 339	***	7	qt
DD 149, 169		5	qt
DD 198, 226		51/2	qt
DD 298, 339		7	qt
DJX		6	qt
DRXC		15	qt
DFX series		28	qt

HALL-SCOTT

ENGINES

Engine		Die	Bore &					
Mode	al	ment	in.)	Cyl	Stroke	((in.)	
590	series	(horiz. or vert.)	590		6	5	x	5
779	series	(horiz.)	779		6	51/4	x	6
400	series		1090		6	53/4	x	7
1091	series		1090		6	53/4	x	7
6182			1091		6	5%	X	7

Oil Pressure

590	series6	0 psi	@	2800 rpm	
400	series6	0 psi	@	1000-1200	
	rpm Hot.				
All	others	10 p	si @	2 350 rpm	

Compression Pressure

590	seriesGasoline-6.6:1 ratio
	standard, 135 psi; L. P. G
	8.7:1 ratio, 200 psi
779	series6.1:1 ratio, 120 psi
400	series5.7:1 ratio standard,
	129 psi @ 1000 rpm
109	1 seriesGasoline-6.4:1 ra-
	tio standard, 128 psi: L. P. G.

IGNITION

-8.8:1 ratio, 205 psi

Cam Angle (Dwell)

590,	1091	56	91	ri	ie	s				34-37	deg
779	series							×		34-37	deg
400	series		0		0					34-39	deg
6182										27-37	deg

Breaker Point Gap

590	series							.022	in.
All	others							.021	in.

Spark Occurs

(Degrees Before Top Cent	er)	
590 series Gasoline:	5	deg
L. P. G.:		
400, 779	2	deg
1091, 6182 Gasoline:	2	deg
L. P. G.:	8	deg

SPARK PLUGS

Make & Type

590	series	*********	CH J-5
All	other	gasoline	

Inlet:	CH	9	Com
Exhaust:	CH	4	Com

All other L. P. G....

**	OGRECA	ALC:					
				Inlet:	CH	6	Com
			B	xhaust:	CH	4	Com

Size

590	series								14	mm
All	others		*	*	*		9		18	mm

Gap

1	590	series	Gasoline:	.025	in.
			L. P. G.:	.015	in.
	All	others	018-	023	in.

VALVES

Operating Tappet Clearance

(Cold unless noted)
590 series, 779...
Inlet & Exhaust: .022 in.

All othersInlet: .021 in. Exhaust: .031 in.

Seat Angle

590	series		14		
	Inlet	&	Exhaust:	45	deg
All	others		Inlet:	30	deg

Exhaust: 45 deg

Face Angle

590 series...

Ir	nlet &	Exhaust:	45	-451/4	deg
All	other	sInlet:		30	deg
		Exhaust:	441	5-443/4	deg

VALVE SPRINGS

Pressure

(Valve Open)

590	series								
	Inner:	80	lb	@	1.750	in.			
	Outer:	116	lb	@	1.812	in.			
1091	series								

Inner: 105 lb @ 1.938 in. Outer: 138 lb @ 2.000 in.

All others ...

Inner: 110 lb @ 1.938 in. Outer: 143 lb @ 2.000 in.

Speed Truck Tire Changes

WITH

KEN-TOOLS

EASIER . . . QUICKER

Quality tools for trucks, buses, farm tractors, and aircraft. Hand forged fromchrome nickel alloy steel. Tougher, last much longer!

T-19 24" Truck and Bus Straight Spoon

T-20 24" Truck and Bus Curved Spoon

T-29

18" Tool for starting first bead down over rim



T-48A

140" Tool for removing and replacing lock rings

Ken-Tool

LOCK RING REMOVERS stand up under tremendous leverage

T-23 24" For Firestone RD, R-1 Rim

T-25

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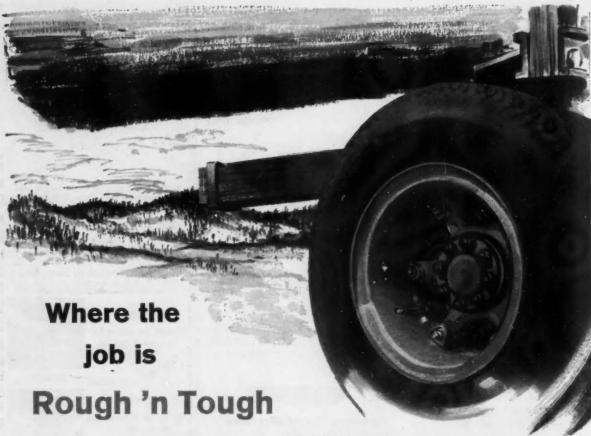
New 18" Ring Remover for 5° Firestone Rims

T-22 18" Combination Lock Ring Tool

T-27 18" Ring Tool for R-1 Rims

SEE YOUR JOBBER on the complete line of Job-Designed Ken-Tools. Forged by the largest exclusive manufacturer of top-quality Tire-changing Tools and Equipment. THE KEN-TOOL MFG. CO., AKRON 5, OHIO.





you'll find a DAYTON WHEEL

NOW...

DAYTON SUPER TUNGSTEN

This long-life Ignition Point is now a member of the Dayton Steel family of famous products.

- Cuts tune-up costs . . . Improves performance . . .
- Increases gas mileage . . . 4 times normal point life!

For more data on this fleet-proved point, write Dayton Automotive Products Co., Box 12, Dayton 1, Ohio.

Let's look at some facts . . . The cost of operating mobile equipment today is high. No operator can afford too much lost operating time. You need rugged equipment that takes the beating of heavy loads, high speeds and long hard driving.

The wheels under your rig have to take that punishment. Low initial cost—repair free operation . . . safety . . . light weight . . . precision machined from fatigue-free metal . . . all are necessary in the wheels that protect the cargo you carry.

You'll find this combination only in a Dayton Cast Spoke Wheel—a wheel made from steel that has a tensile strength of 70,000 lbs. P.S.I.! That's the reason why you'll find them—almost exclusively—on equipment that carries the heaviest loads, under the most difficult conditions. Use Dayton Wheels on your equipment. They'll pay for themselves in short order.



DAYTON WHEELS





by The Dayton Steel Foundry Co.- P. O. Box 1022, Dayton 1, Ohio

World's leading manufacturer of cast wheels and brake drums



New light, low-cost Hercules Diesel installed for use in city delivery

Motor Cargo, Inc., of Akron, Ohio, is a major carrier operating more than 2,000 vehicles in a network covering the northeastern part of the country.

They are experimenting with the new Hercules truck diesels, using a 20,000-22,000 pound GVW vehicle powered with the lightweight, low-cost—only \$1,400 list price—D-298-H engine. This six-cylinder diesel is rated 115 horsepower at 3,000 RPM and weighs only 850 pounds.

Check these advantages — diesel fuel economy, simple installation, low maintenance costs, low original cost—and you have the reasons Motor Cargo made this move.

Hercules is the first U.S. engine maker to design diesel power plants specifically for light and medium-weight trucks. You don't have to pay high-price or high-weight penalties for diesel economy any more. Specify your next truck with a Hercules diesel, available in models from 50 to 175 horse-power.

If you are about to major-overhaul a gasoline-powered vehicle, call your Hercules distributor for the facts on how you can save with Hercules diesels. Or write Hercules Motors Corp., Canton 2, Ohio.



√ Check Your Tune-Up

P& H

ENGINES

Engine	Displace-			Bore &
Model	ment (cu in.)	Cyl		Stroke (in.)
387H-18T	261	3		41/2 x 51/2
487H-18T	348	4	*	41/2 x 51/2
687H-18T	522	6		4½ x 5½



KENDALL DUAL ACTION MOTOR OIL licks both hot and cold running engine problems. Its exclusive formulation offers a new concept in fleet engine lubrication—protects against wear, repair and high oil consumption.

USE KENDALL F-L OIL or KENDALL SUPER
D for heavy duty gasoline or diesel engines.

Contact your Kendall Distributor for details

KENDALL REFINING COMPANY . BRADFORD, PENNA.

Lubrication Specialists since 1881

Oil Pressure

All models ...

55-100 psi @ 1800 rpm

Compression Pressure

All models 325-400 psi

VALVES

Operating Tappet Clearance

All models012-.014 in.

Seat Angle

All models 891/4 deg

Face Angle

All models 901/4 deg

TORQUE

Manifold Bolt

All models 50 lb-ft

VALVE SPRINGS

Free Length

All models ... 23/8-2 13/32 in.

Pressure

All models 105 lb

CAPACITIES

Crankcase

387H-18T								22	qt
487H-18T								24	qt
687H-18T								32	at

LUBRICATION

Crankcase

All models...Above 30 deg use SAE 30; Below 30 deg use SAE 20.

003

Furious truck driver to 'phone operator: "Am I crazy, or are you?"

Operator: "I'm sorry but we do not

Operator: "I'm sorry, but we do not have that information!"

COMMERCIAL CAR JOURNAL, April, 1960



A man well worth knowing— Your DITZLER Representative

He can often save you important time and money

- DITZLER does more than provide you with high-quality products for all your refinishing needs. We offer you the assistance of a field staff with practical refinishing experience.
- Your DITZLER representative has the knowledge that enables him to recommend materials and painting methods best suited to your type of operation. He can specify materials that decrease labor costs without sacrificing quality. He can offer advice as well as provide finishes for use on special metal surfaces.
- His practical know-how makes him competent to recommend proper arrangements of paint-shop facilities that improve their effi-

- ciency. Moreover, his experience is backed by highly skilled engineering assistance to aid him in analyzing and working out your painting problems satisfactorily.
- Make use of this plus service. You'll find your DITZLER representative well worth knowing. His recommendations often can save you time and money.

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DITZLER

® PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLAS



IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

WAUKESHA

ENGINES

Engine	Displace-		Bore &
Model	ment (cu in.)	Cyl	Stroke (in.)
190GLB	265	6	3% x 4
195GKA	320	6	41/8 x 4
135GKB	426	6	41/8 x 5
135GZB	451	6	43% x 5
140GK, 140GKB	525	6	4% x 5½
140GZB	554	6	45/8 x 51/2
145GK, 145GKB	779	6	51/4 x 6
145GZB	817	6	53/8 x 6
WAKB	1197	6	61/4 x 61/2
Diesels			
190DLCA	265	6	33/4 x 4
195DLCA	302	6	4 x 4
135DKB, 135DKBS	426	6	41/4 x 5
148DKB, 148DKBS	779	6	51/4 x 6
WAKDB, WAKDBS	1197	6	61/4 x 61/2

Oil Pressure

190GLB...12-15 psi @ governed speed

WAKB40 psi @ 1500 rpm 135GKB, 135GZB...

30 psi @ 1800 rpm

Other gasoline engines...
40 psi @ governed speed

40 psi @ governed speed 190DLCA...

15 psi & 1500 rpm 195DLCA...

30 psi @ 2000 rpm

135DKB, 135DKBS...

40 psi @ 2200 rpm 148DKB, 148DKBS...

40 psi @ 1500 rpm WAKDB, WAKDBS...

40 psi @ 1300 rpm

Compression Pressure

(At cranking speed)

(-re ormuniting aboom)	
195GKA	110 psi
145GK, WAKB	115 psi
Other gas engines	120 pai



"Monly, I draw a thin line between tolerance and tolerate!"

190, 195DLCA 375 psi 148DKB, 148DKBS ... 435 psi 135DKB, 135DKBS ... 450 psi WAKDB, WAKDBS ... 450 psi

IGNITION

Cam Angle (Dwell)

All gasoline engines....31-37 deg

Breaker Point Gap

All gasoline engines.... .018 in.

SPARK PLUGS

Size

190GLB,	19	95	G	K	V	A				18	mm
WAKB .										18	mm
All other	PQ.									14	mm

Gas

P	
All engines	 .025 in.

VALVES

Operating Tappet Clearance

(Cold engine)

(Cold engine)		
190GLBInlet	.010	in.
Exhaust	: .016	in.
195GKAInlet	: .015	in.
Exhaust	: .023	in.
135 seriesInlet	: .011	in.
Exhaust	: .023	in.
140 seriesInlet	: .013	in.
Exhaust	: .019	in.
145GKInlet	: .013	in.
Exhaust	: .024	in.
145GKB & GZBInlet	: .013	in.
Exhaust	: .030	in.
WAKBInlet	: .014	in.
Exhaust		
190DLCAInlet	: .010	in.
Exhaust	: .020	in.
195DLCAInlet	: .010	in.
Exhaust	.022	in.
135DKB, DKBSInlet:	: .011	in.
Exhaust	.023	in.
148DKB, DKBSInlet:	.015	in.
Exhaust	.028	in.

Seat Angle

195GLB	***	Inlet:	45	deg
		Exhaust:	45	deg
195GKA,	135	series		
		Inlet:	441/2	deg
		Exhaust:	441/2	deg

Inlet: .014 in. Exhaust: .024 in.

WAKDB, WAKDBS...

140, 145 series... Inlet: 30 deg Exhaust: 45 deg deg Exhaust: 441/2 deg 135DKB, 135DKBS... Inlet: 30 Exhaust: 451/2 deg WAKDB, WAKDBS ... Inlet: 30 deg Exhaust: 45 deg Other diesels ... Inlet & Exhaust: 45 deg

VALVE SPRINGS

Pressure

(Valve Open) 190GLB 71 lb @ 1.594 in. 195GKA... 114-134 lb @ 1.938 in. 135 series... 154-170 lb @ 1.859 in. 140GK... Inner: 55 lb @ 1.438 in. Outer: 86 ib @ 1.656 in. 140GKB, 140GZB... Inner: 70 lb @ 1.438 in. Outer: 127 lb @ 1.656 in. 145GK ... Inner: 81 lb @ 2.063 in. Outer: 118 lb @ 2.375 in. 145GKB... Inner: 100 lb @ 2.063 in. Outer: 158 lb @ 2.375 in. 145GZB... Inner: 81 lb @ 2.063 in.

Outer: 118 lb @ 2.375 in. 190DLCA... 65-77 lb @ 1.594 in. 195DLCA...

114-134 lb @ 1.938 in.

135DKB, 135DKBS... 162 lb @ 2.313 in. 148DKB, 148DKBS... Inner: 81 lb @ 2.063 in. Outer: 118 lb @ 2.375 in.

TORQUE

Cylinder nedd Bolt	
190GLB, 195GKA 92-100	lb-ft
135, 140 series 175	lb-ft
145GK, 145GKB	
Long: 175	lb-ft
Short: 150	lb-ft
145GZBLong: 200	lb-ft
Short: 175	lb-ft
WAKB140-150	lb-ft
190, 195DLCA 96-100	lb-ft
135DKB, DKBS100-133	lb-ft
Other diesels250-267	lb-ft

ROILINE

ENGINES

Displace-		Bore &
ment (cu in.)	Cyl	Stroke (in.)
570	V-8	45% x 41/4
884	V-8	53/8 x 47/8
	ment (cu in.) 570	ment (cu in.) Cyl 570 V-8

Oil Pressure

TH 570... 45 psi @ 2000 rpm TH 884... 45 psi @ 2000 rpm

Compression Pressure

All models ...

125 psi @ cranking speed

IGNITION

Cam Angle

All models 21-30 deg

Breaker Point Gap

All models016 in.

Spark Occurs

(Degrees Before Top Center)

TH 884@ 600 rpm: 4 deg @ 2600 rpm: 32 deg

TH 570@ 600 rpm: 5 deg @ 2800 rpm: 35 deg

Cyl	Bore & Stroke (in.)
V-8	45% x 41/4
V-8	53/8 x 47/8

SPARK PLUGS

Make & Type

All models CH J-6

Size

All models 14 mm

Gap

All models025-.030 in.

Torque

All models 25-30 lb-ft.

VALVES

Operating Tappet Clearance

All models (Hot) ...

Inlet & Exhaust: .013 in. deg use SAE 10W.

Seat and Face Angle

All models 45 deg

TORQUE

Cylinder Head Bolt

All models 90 lb-ft

Manifold Bolt

All models 60 lb-ft

VALVE SPRINGS

Free Length

TH 570 2 29/64 in. TH 884 23/4 in.

Pressure

TH 570 Valve open: 145 lb Valve closed: 61 lb. TH 884 Valve open: 156 lb Valve closed: 63 lb

LUBRICATION

All models... Above 90 deg use SAE 40. From 32 to 90 deg use SAE 30. From 0 to 32 deg use SAE 20W. Below 0



EVEN UNDER THE MOST SEVERE CONDITIONS ...

You can end down-time caused

Autolite's exclusive

ANCHOR-BOND ®
eliminates a major cause
of battery failure . . .

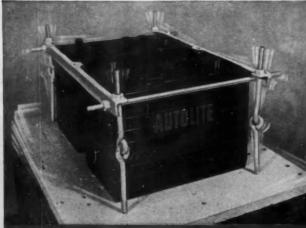
plate-destroying
vibration

Elements anchored with ANCHOR-BOND give you your best protection against down-time caused by battery mechanical failure. Epoxy bonding material (shown in red) anchors elements in place to prevent vital power-producing material from shaking out.

This exclusive Autolite anchoring process has been proved by thousands of hours in laboratory tests and on the road. Short haul, over the road, or off the road—battery failures due to plate vibration are eliminated.

So to eliminate one more factor from your list of downtime causes, specify Autolite ANCHOR-BOND Fleet Batteries. There's an Autolite Fleet Battery engineered specifically for every fleet requirement.

Now! Autolite sponsors the election news with Dave Garroway on NBC-TV TODAY Show - and "News on the Hour," NBC Radio.



Here's one of the toughest tests ever made on fleet batteries! Both Autolite ANCHORBOND and batteries of ordinary construction were clamped to this vibrating machine with these amazing results. Ordinary battery failed after only 55 hours on the test machine. Autolite ANCHORBOND showed no damage at all after 1,000 hours of testing—still delivered full power!



Exclusive electronic quality control of Autolite Batteries assures full power at time of activation! Every dry-charged Autolite Fleet Battery gets this Pol-R-Tronic test which detects construction defects before it leaves the factory. This means you get only top-quality, pretested batteries that avoid activation failures when it's time to put your dry-charged Autolite Fleet Batteries into service.

by battery mechanical failure!



Dry Charged . . . fresh when you buy!



AUTOLITE.

THE ELECTRIC AUTOLITE COMPANY
TOLEDO 1, OHIO

FIRST STEEL WHEEL IN 30 YEARS TO FIRESTONE ACCU-RIDE



TRUEST-ROLLING STEEL WHEEL EVER MADE COSTS NO MORE WITH ITS TWICE

Meet the world's first mass-produced precision steel wheel! It's performance proved by eight years and 150 million miles of tests. Firestone's Accu-Ride disc wheel is the truest-rolling steel wheel ever made and the only wheel specially designed to withstand today's high-speed, heavy-load operating conditions. Accu-Ride permits greater load capacities plus a maximum extension of vehicle and tire life. That's because Accu-Ride wheels are spin-formed for maximum control of dimensions and for perfect balance. Its continuous Thruweld provides a joint twice as strong as any other fastening of a rim to a disc. Exclusive Firestone Perma-Plate finish beats corrosion. And Accu-Ride wheels are available at no extra cost for every truck, bus and truck-trailer on the road. For further information on Firestone Accu-Ride wheels—or Firestone Precision Rims—write, wire or call the Firestone Technical Service Man at Firestone Steel Products Co., Department FSP-5(6), Akron 1, Ohio.

FIRESTONE TIRE-TAILORED RIMS

Firestone's precision-correct, compression-fit truck and bus rims give complete support to tires, put full tread width on pavement for maximum traction, longer tread life, lower cost-per-mile performance. They are tailored to make tires fit better and last longer and are available on Accu-Ride wheels for both tube-type and tubeless tires.



* Commander RH

RH5°

F15° Challenger |

N5° Challeger

enr 15" Dran-Center

ALL FIRESTONE RIMS ARE PROTECTED WITH EXCLUSIVE

BEAT RUN-OUT AND BOOST TIRE LIFE PRECISION WHEEL



MEAN EXTRA TIRE MILES

5° Commander: World's most popular 3-piece rim. Stress-tested, fleet-proved. Full bead support, wide base design, continuous side ring, full offset.

RH5°: 2-piece disc wheel rim. Continuous side ring, full bead support and wide base eliminate rocking, reduce flexing for longer tire life.

FLS° Challenger: Full-offset, work-weight, tube-type rim. Eliminates bead chafing, rocking. Will do heavy work usually expected from heavier rims.

NS° Challenger: Lightest weight tube-type rim made. Weighs up to 10 lbs. less than comparable rim. 5° bead support reduces tire rocking, sidewall flexing.

15° Drup-Center: 1-piece official design for tubeless rims. Open-face mounting ring stops wobble, 15° bead seat on rim and tire gives true air seal.

CORROSION-PROOF FIRESTONE PERMA-PLATE FINISH

HERE'S HOW ACCU-RIDE WHEELS PAY OFF









Acen-Ride wheels minimize radial run-out, leap and bounce, give 3 times smoother ride than out-ofround wheels.

Accu-Ride wheels reduce tire-wearing wobble (from lateral run-out) by 64% over out-of-line wheels to make tires last longer.



PRODUCTS COMPANY

AKRON I. OHIO

INTEGRITY, QUALITY, ACCURACY, DEPENDABILITY

COMMERCIAL CAR JOURNAL, April, 1960

√ Check Your Tune-Up

PASSENGER CARS

Checker	-Superba	C	hevrolet	Comet	Corvair
Falcon	Ford	Dart	Dodge	Plymouth	Rambler
Rambler	-America	n	Studeba	ker-Lark	Valiant

Plymouth 225 ... 36-42 deg Plymouth 318 ... deg Rambler 195 "L" head ... 17-22 deg Rambler 195 OHV deg Rambler 250 deg Studebaker 169... deg Studebaker 259... 28-32 deg Superba 226 39 deg Valiant 170 36-42 deg

Breaker Point Gap

235 & 283 ...

Comet 144

Corvair 140

Dodge 361

Dodge Dart 225..

Dodge Dart 318...

Falcon 144

Ford 223

Ford 292

Plymouth 225 ...

Plymouth 318 ...

Rambler 195 OHV

Rambler 195 "L".

Rambler 250

Studebaker 169 ...

Studebaker 259 ...

Superba 226

Valiant 170

.019 in.

.019 in.

.024-.026 in.

.014-.019 in.

.017-.023 in.

.014-.019 in.

.024-.026 in.

.024-.028 in.

.014-.016 in.

.017-.023 in.

.014-.019 in.

.017-.02 in.

.014-.019 in.

.018-.022 in.

.017-.023 in.

.016 in.

.020 in.

.016 in.

Engine

Chevrolet

ENGINES

Engine	Displace-		Bore &
Model	ment (cu in.)	Cyl	Stroke (in.)
Chevrolet 235	235.5	6	3 9/16 x 3 15/16
Chevrolet 283	283.0	8	37/8 x 3
Comet 144	144.3	6	3½ x 2½
Corvair 140	140.0	6	33/8 x 2 39/64
Dodge 361	361.0	8	41/8 x 33/8
Dodge Dart 225	225.0	6	3 13/32 x 4½
Dodge Dart 318	318.0	8	3 29/32 x 3 5/16
Falcon 144	144.3	6	3½ x 2½
Ford 223	223.0	6	35/8 x 3 39/64
Ford 292	292.0	8	33/4 x 3 19/64
Plymouth 225	225.0	6	3 13/32 x 41/8
Plymouth 318	318.0	8	3 29/32 x 3 5/16
Rambler 195	195.6	6	31/8 x 41/4
Rambler 250	250.0	8	3½ x 3¼
Studebaker 169	169.6	6	3 x 4
Studebaker 259	259.2	8	3 9/16 x 31/4
Superba 226	226.0	6	3 5/16 x 43/8
Valiant 170	170.0	6	3 13/32 x 3½

E	L	0-	

(Degrees	Before	Top	Center)
** *			

Engine Chevrolet 235 deg Chevrolet 283 4 deg Comet 144 deg Corvair 140 deg Dodge 361 10 deg Dodge Dart 225..... 21/2 deg Dodge Dart 318..... deg Falcon 144 deg Ford 223 deg Ford 292 deg 3 Plymouth 225 21/2 deg Plymouth 318 deg Rambler 195 "L" head deg Rambler OHV (American) 8 deg Rambler OHV (Six). 5 deg Rambler 250 Top center Studebaker 169 deg 2 Studebaker 259 deg Superba 226 "L" head deg Superba 226 OHV... 31/2 deg

Oil Pressure

Engine

Chevrolet 235 & 283...

35 psi @ 2000 rpm

Comet 144...

45-55 psi @ 2000 rpm

Corvair 140...

35 psi @ 2000 rpm

Dodge 361...

45-65 psi @ 2000 rpm

Dodge Dart 225...

40-65 psi @ 2000 rpm

Dodge Dart 318...

50 psi @ 2000 rpm

Falcon 144...

45-55 psi @ 2000 rpm

Ford 223...

45-50 psi @ 2000 rpm

Ford 292...

45-55 psi @ 2000 rpm

Plymouth 225...

40-65 psi @ 2000 rpm

Plymouth 318...

45-65 psi @ 2000 rpm

Rambler 195...

50 psi @ 3000 rpm

Rambler 250...

55 psi @ 3000 rpm

Studebaker 169 & 259...

20-40 psi @ 2000 rpm

Superba 226...

20 psi @ 375 rpm

Valiant ...

40-65 psi @ 2000 rpm

IGNITION

Cam Angle (Dwell)

Engine

Chevrolet 235 28	-35 deg
Chevrolet 283 26	-33 deg
Comet 144 35	-38 deg
Corvair 140 33	-34 deg
Dodge Dart 225 36	-42 deg
Dodge Dart 318 27	-32 deg
Falcon 144 35	-38 deg
Ford 223 35	-38 deg
Ford 292 26	-28½ deg

Valiant 170

SPARK PLUGS

Make & Type

Engine	
Chevrolet 235 & 283	AC 44
Comet 144	CH F14Y
Corvair 140	AC 44FF
Dodge 361	AL A42
Dodge Dart 225	AL AG42
Dodge Dart 318	AL A42
Falcon 144	CH F14Y
Ford 223	CH 870
Ford 292	CH F14Y
Plymouth 225	AL AG42
	AL A42
Rambler 195 & 250.	AL AL7,
ARL82, or CH H1	0 or H18Y
Studebaker 169	CH J7
Studebaker 259	CH H18Y
Superba 226	
"L" head	CH UD16
Superba 226 OHV	CH N8
Valiant 170	AL AGAS

Size

		L		
En	œ	å	99	6
Take	8	А	ДŒ	C

0		
Chevrolet 235 & 283	14	mm
Comet 144	18	mm
Corvair 140	14	mm
Dodge 361	14	mm
Dodge Dart 225 & 318	14	mm
Falcon 144	18	mm
Ford 223 & 292	18	mm
Plymouth 225 & 318	18	mm
Rambler 195 & 250	14	mm
Studebaker 169 & 259.	14	mm
Superba 226 "L"	18	mm
Superba 226 OHV	14	mm
Valiant 170	14	mm

Gap

Engine

Diffine		
Chevrolet		
235 & 283	.033038	in.
Comet 144	.032036	in.
Corvair	.035	in.
Dodge 361	.035	in.
Dodge Dart		
225 & 318	.035	in.
Falcon 144	.032036	in.
Ford 223 & 292	.032036	in.
Plymouth		
225 & 318	.035	in.
Rambler		
195 & 250	.033037	in.
Studebaker 169	.028033	in.
Studebaker 259	.033038	in.
Superba 226 "L".	.028030	in.
Superba 226		
OHV	.032033	in.
Valiant 170	035	in

Torque

Engine

Chevrolet 235 & 283	25	lb-ft
Comet 144	20-30	lb-ft
Corvair 140	25	lb-f
Dodge 361	30-32	lb-ft
Dodge Dart		
225 & 318	30-32	lb-f
Falcon 144	20-30	lb-f
Ford 223 & 292	20-30	lb-f
Plymouth		
225 & 318	30-32	lb-f
Rambler		
195 & 250	30	lb-f
Studebaker		
169 & 259	25-30	lb-f
Superba 226		
"L" head	34	lb-f
Superba 226 OHV.	30	lb-f
Valiant 170	30-32	lb-f

VALVES

Operating Tappet Clearance

(Hot unless noted)		
Chevrolet 235 & 283	· H	ydi
Comet 144		
Intake & Exhaust:	.016	in
Corvair 140	H	yd
Dodge 361		
Dodge Dart 225 Intake:	.010	in
Exhaust:	.020	in
Dodge Dart 318Intake:	.010	in
Exhaust:	.018	in
Falcon 144		
Intake & Exhaust:	.016	în
Ford 223 & 292		
Intake & Exhaust:	.019	in
Plymouth 225Intake:	.010	in
Exhaust:	.020	in
Plymouth 318Intake:	.010	in
Exhaust:	.018	in

Exhaust: .018	in
Rambler 195 "L" head	
Intake & Exhaust: .016	in
(Cold)	
Rambler 195 OHV	

Rambler	195	OHV		
		Intake:	.012	in
		Exhaust:	.016	ir
Rambler	250	Intake:	.012	ir
		Exhaust:	.014	ir
Studebak	er :	169Intake	&	Ex

NAME AND ADDRESS OF THE PARKS OF THE	WALL I I I WAY DOLLARD	-	ALC: U
haust:	.018 in. (Cold)	
Studebaker	259Intake	&	Ex
haust:	.023025 in.		
Superba 22	6 "L" head		

		Exhaust:	.014	in.
Superba	226 OF	IV		
		Intake:	.017	In.
		Exhaust:	.023	in.
Valiant	170	Intake:	.010	in.
		Exhaust:	.020	in.

Seat Angle

Chevrolet 235.	Intake:	31	deg
	Exhaust:		
Chevrolet 283			
Intake	& Exhaust:	46	deg
Comet 144			
Intake &	Exhaust:		

	was opened	-	Transfer on the co. o.			
			45	1/2-453/4	deg	
Cory	vair 14	10				

	Intake	&	Exhaust:	45	deg
Dodge	361				
	Intoke	. 2.	Exhaust.	AK	dog

	Inta	ke &	Exhaust:	45	deg
Dodge	Dart	225.	Intake:	45	deg
			Exhaust:	47	deg
25 5 -	Th	-			

Dodge	Dart 31	18.	* *		
	Intake	&	Exhaust:	45	deg
Falcon	144				

Intake	&	Exhaust:		
		451/2-453/4	deg	

				451/2-453/4	deg
Ford	223	R	292		

Inte	anc	ex.	Exhaust.		
			451/2-48	53/4	deg
Plymout	th 2	225	Intake:	45	deg
			Exhaust	477	don

Intake & Evhauet

riymouth	220		Intake.	40	ueg
			Exhaust:	47	deg
Plymouth	318				
In	take	&	Exhaust:	45	deg

Rambler	195				
I	ntake	&	Exhaust:	45	deg
Rambler	250 .		Intake:	30	deg
			T 1 .	4.00	

Studebak	er 16	69 8	259	-	
1	ntak	e &	Exhaust:	45	deg
Superba	226		Intake:	30	deg

Superba	226	 Intake:	30	deg
		Exhaust:	44	deg
Valiant	170			

Intake & Exhaust: 45-47 deg

VALVE SPRINGS

Pressure

(At Open Length)

Engine

Chevrolet 235...

158-168 lb. @ 1.528 in. Chevrolet 283...

155-165 lb. @ 1.366 in. Comet 144...

117 lb. @ 1.222 in.

Corvair 140...

141-149 lb. @ 1.148 in. Dodge 361. 195 lb. & 1.470 in.

Dodge Dart 225 & 318... 177 lb. @ 1.310 in.

Falcon 144...

117 lb. @ 1.222 in. Ford 223 & 292...

161-177 lb. @ 1.390 in. Plymouth 225 & 318...

177 lb. @ 1.310 in. Rambler 195 "L" head...

75-82 lb. @ 1.440 in. (TURN TO NEXT PAGE, PLEASE)

Passenger Cars

Continued from Page 245

Rambler 195 OHV...

115-125 lb. @ 1.438 in.

Rambler 250...

150-160 lb. @ 1.438 in.

Studebaker 169...

93-103 lb. @ 1.312 in.

Studebaker 259...

105-115 lb. @ 1.671 in.

Superba 226 "L" head...

103-110 lb. @ 1.375 in.

Superba 226 OHV...

174-176 lb. @ 1.405 in.

Valiant 170...

177 lb. @ 1.310 in.

BATTERY

Amp-Hour Capacity

Chevrolet 235 & 283	53
Comet 144	40
Corvair 140	35
Dodge 361	60
Dodge Dart 225 & 318	50
Falcon 144	40
Ford 223 & 292	55
Plymouth 225 & 318	50
Rambler 195 "L"	40
Rambler 195 OHV	45
Rambler 250	50
Studebaker 169 & 259	50
Superba 226	50
Valiant 170	50

Plates Per Cell

Timing Let well	
Chevrolet 235 & 283	9
Comet 144	9
Corvair 140	7
Dodge 361	11
Dodge Dart 225 & 318	9
Falcon 144	9
Ford 223 & 292	11 -
Plymouth 225 & 318	9
Rambler 195	7
Rambler 250	9
Studebaker 169 & 259	9
Superba 226	9
Valiant 170	9

Terminal Grounded

Chevrolet 235 & 283	Neg
Comet 144	Neg
Corvair 140	Neg
Dodge 361	Neg
Dodge Dart 225 & 318	Neg
Falcon 144	Neg

Ford 223 & 292	Neg
Plymouth 225 & 318	Neg
Rambler 195 & 250	Neg
Studebaker 169 & 259	Neg
Superba 226	Neg
Valiant 170	Neg

FRONT END

Toe-In

Chevrolet 235 & 28	3	
	1/16-1/8	in.
Comet 144	1/16-1/8	in.
Corvair 140	1/32-3/32	in.
Dodge 361	3/32-5/32	in.
Dodge Dart		
225 & 318	3/32-5/32	in.
Falcon 144	1/16-1/8	in.
Ford 223 & 292.	1/16-5/32	in.
Plymouth		
225 & 318	3/32-5/32	in.
Rambler		

195	&	250	1/16-3/16	in
Studebal	ker			

169 & 25	9	1/16-1/8	in.
Superba 226		1/16-1/8	in.
Valiant 170 .		3/32-5/32	in.

Camber (Positive)

Chevrolet		
235 & 283	0-1	deg
Comet 144	1/4-11/4	deg
Corvair 140	0-1	deg
(Rear)	1-2	deg
Dodge 361	1/8- 5/8	deg
Dodge Dart		
225 & 318	1/8- 5/8	deg
Falcon 144	1/4-11/4	deg
Ford 223 & 292	1/2-11/2	deg
Plymouth		
225 & 318	1/8- 5/8	deg
Rambler 195 & 250		
1/4 deg Neg to	1/4 deg	Pos
Studebaker		
169 & 259	0-1	deg
Superba 226	1/2-11/2	deg
Valiant 170	1/8- 5/8	deg

Caster

Chevrolet	1/37 1/79
235 & 283	½N- ½P
Comet 144	1P-2 P
Corvair 140	4P-41/2P
Dodge 361	1/4 N-11/4 N
Dodge Dart	
225 & 318	1/4 N-11/4 N
Falcon	1P-2 P
Ford 223 & 292	1/2 N- 1/2 P
Plymouth	
225 & 318	0 - IN
Rambler	
195 & 250	0 - 1/2P

Studebal	ker	
169	& 259	1N-21/2N
Superba	226	2P
Waliant	170	1/, N-11/, N

King Pin Slant

King i in Siani		
Chevrolet		
235 & 283	71/4	deg
Comet 144	7	deg
Corvair 140	7	deg
Dodge 361	$6^{1/2}$	deg
Dodge Dart		
225 & 318	61/2	deg
Falcon 144	7	deg
Ford 223 & 292	63/4	deg
Plymouth		
225 & 318	61/2	deg
Rambler 195		
(American)	8	deg
Rambler 195		
(Six) & 250	61/4	deg
Studebaker		
169 & 259	6	deg
Superba 226	7	deg
Valiant 170	71/2	deg

CAPACITIES

Crankcase

Ol dilkense		
Chevrolet 235	5	qt
Chevrolet 283	4	qt
Comet 144	31/2	qt
Corvair 140	4	qt
Dodge 361	5	qt
Dodge Dart 225	4	qt
Dodge Dart 318	5	qt
Falcon 144	31/2	qt
Ford 223	4	qt
Ford 292	5	qt
Plymouth 225	4	qt
Plymouth 318	5	qt
Rambler 195 & 250	4	qt
Studebaker		
169 & 259	5	qt
Superba 226	5	qt
Valiant 170	4	qt

Transmission

Chevrolet 235 & 283	2 p
Comet 144	2.1 p
Corvair 140	1.9 p
Dodge 361	5 p
Dodge 225 & 318	23/4 p
Falcon 144	2.1 p
Ford 223 & 292	3½ p
Plymouth 225 & 318	5 p
Rambler 195	11/2 p
Rambler 250	21/4 P
Studebaker 169	2.3 p
Studebaker 259	3.8 r
Superba	2.6 p
Valiant 170	5 r

Rear Axle

Chevrolet 235 & 283	4 pt
Comet 144	21/2 pt
Corvair 140	3.1 pt
Dodge 361	31/2 pt
Dodge Dart 225	31/4 pt
Dodge Dart 318	3½ pt
Falcon 144	21/2 pt
Ford 223 & 292	4½ pt
Plymouth 225	31/4 pt
Plymouth 318	3½ pt
Rambler 195	3 pt
Rambler 250	4 pt
Studebaker 169 & 259	21/2 pt
Superba 226	3 pt
Valiant 170	2 pt

Cooling System

(Without heater)		
Chevrolet 235	17	qt
Chevrolet 283	171/2	qt
Comet 144	8.7	qt
Corvair 140	Air coo	led
Dodge 361	16	qt
Dodge Dart 225	13	qt
Dodge Dart 318	20	qt
Falcon 144	8.7	qt
Ford 223	15	qt
Ford 292	19	qt
Plymouth 225	13	qt
Plymouth 318	21	qt
Rambler 195 "L"	11	qt
Rambler 195 OHV	10	qt
Rambler 250	20	qt
Studebaker 169	11	qt
Studebaker 259	17	qt
Superba 226	12	qt
Valiant 170	13	qt

LUBRICATION

Crankcase

Chevrolet 235 & 283: Above 32 deg use SAE 20W, SAE 20 or SAE 10W-30; Between 0 and 32 deg use SAE 10W or SAE 10W-30; Below 0 deg use SAE 5W or SAE 5W-20.

Comet 144: Above 32 deg use SAE 20 or SAE 20W; Between -10 deg and 32 deg use SAE 10 or SAE 10W; Below -10 deg use SAE 5W.

Corvair 140: Above 32 deg use SAE 30; Between 10 and 32 deg use SAE 10W; Below 10 deg use SAE 5W-20.

Dodge 361: Above 35 deg use SAE 30, SAE 20W-40 or SAE 10W-30; Between 10 and 35 deg use SAE 20W, SAE 20W-40 or SAE 10W-30; Between —10 deg and 10 deg use SAE 10W, SAE 10W-30 or SAE 5W-20; Below —10 deg use SAE 5W or SAE 5W-20.

Dodge Dart 225 & 318: Above 35
deg use SAE 30, SAE 20W-40
or SAE 10W-30; Between 10
and 35 deg use SAE 20W,
SAE 20W-40 or SAE 10W-30;
Between —10 deg and 10 deg
use SAE 10W, SAE 10W-30
or SAE 5W-20; Below —10
deg use SAE 5W or SAE 5W20.

Falcon 144: Above 32 deg use SAE 20 or SAE 20W; Between —10 deg and 32 deg use SAE 10 or SAE 10W; Below —10 deg use SAE 5W.

Ford 223 & 292: Above 32 deg use SAE 20 or SAE 20W; Between —10 deg and 32 deg use SAE 10 or SAE 10W; Below —10 deg use SAE 5W.

Plymouth 225 & 318: Above 32 deg use SAE 30, SAE 10W-30 or SAE 20W-40; Between -10 deg and 10 deg use SAE 10, SAE 10W-30 or SAE 5W-20; Below -10 deg use SAE 5W or SAE 5W-20.

Rambler 195 & 250: Above 32 deg use SAE 20; Between 10 deg and 32 deg use SAE 20W or SAE 10W-30; Between —10 deg and 10 deg use SAE 10W; Below —10 deg use SAE 5W or SAE 5W-20.



"It'd be a swell place to work, if they didn't treat us like dogs!"

Studebaker 169 & 259: Above 32
deg use SAE 30, SAE 10W-30
or SAE 20W-40; Between 10
deg and 32 deg use SAE 20W
or SAE 10W-30; Between
—10 deg and 10 deg use SAE
10W or SAE 10W-30; Below
—10 deg use SAE 5W or SAE
5W-20.

Superba 226: Above 60 deg use SAE 30; Between 32 deg and 60 deg use SAE 20; Below 32 deg use SAE 10W.

Valiant 170: Above 32 deg use SAE 30, SAE 10W-30 or SAE 20W-40; Between 10 deg and 32 deg use SAE 20W, SAE 10W-30, or SAE 20W-40; Between —10 deg and 10 deg use SAE 10W, SAE 10W-30 or SAE 5W-20; Below —10 deg use SAE 5W or SAE 5W-20.

Transmission

Chevrolet 235 & 283: Use SAE 90 all year; in extreme cold use SAE 80.

Comet 144: Use SAE 80 all year.

Corvair 140: Use SAE 80 all year.

Dodge 361: Above 10 deg use SAE 80; Below 10 deg use SAE 75.

Dodge 225 & 318: Above 10 deg use SAE 80; Below 10 deg use SAE 75.

Falcon 144: Use SAE 80 all year.

Ford 223 & 292: Use SAE 80 all year.

Plymouth 225 & 318: Above 10 deg use SAE 80; Below 10 deg use SAE 75.

Rambler 195 & 250: Use SAE 80 all year.

Studebaker 169 & 259: Use SAE 90 all year.

Superba 226: Use SAE 90 all year.

Valiant 170: Above 10 deg use SAE 80; Below 10 deg use SAE 75.

(TURN TO NEXT PAGE, PLEASE)

NEW!

SUPER "BOS" TIRE DEMOUNTER

Removes The Most Stubborn Tire From

Handles All Type Rims and All Size Truck Tires, 15" to 24"

Rim In Minutes . . !

CAN BE USED IN SHOP AND FIELD.

Hein-Werner unit forces tire off rim. Avoids in-jury to operator, rim and



Testimonial -

MR. I. L. TEAGUE says:

"You can quote me on the Demounter as feeling that
this is the only truck and tractor tire breakdown tool
I have ever seen that would do the job, and I have
bought plenty of different ones jn my thirty-eight
years in business."

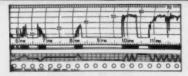
I. L. TEAGUE
Tagwig's Sunse Service

Teague's Super Service Elm at Jefferson Waxahachie, Texas

. . ALSO AVAILABLE . . . #59 TIRE BRANDER For Permanent Identification FREE! Sample Tire Mileage Record Form FREE!

EVERHOT Mfg. Co. Maywood, III.

NEW 31-DAY "STRIP" CHART helps truck owners cut operating costs



New WAGNER-SANGAMO

graphically records truck operations -up to 31 days-on single chart

This tamper-proof instrument provides a permanent graphic report of every run of each Tachograph-equipped truck. Recorded time of operation, duration of stops, speeds, and distances traveled give you valuable information . help you plan better routing, control speed, cut wasted time, and reduce truck operating costs. For details, mail the coupon.



Wasner Electric Corporation 6476 PLYMOUTH AVE., ST. LOUIS 33, MO., U.S.A. Send FREE copy of Bulletin SU-140.

Company	_
Address	

vehicles.

Passenger Cars

Continued from Page 247

Rear Axie

Chevrolet 235 & 283: Use SAE 90 all year.

Comet 144: Use SAE 90 in summer and SAE 80 in winter.

Corvair 140: Use SAE 80 all year.

Dodge 361: Above 10 deg use SAE 90; Between -30 deg and 10 deg use SAE 80; Below -30 deg use SAE 75.

Dodge Dart 225 & 318: Above 10 deg use SAE 90; Between -30 deg and 10 deg use SAE 80; Below -30 deg use SAE

Falcon 144: Use SAE 90 in summer and SAE 80 in winter.

Ford 223 & 292: Use SAE 90 all year; In extreme cold use SAE 80.

Plymouth 225 & 318: Above 10 deg use SAE 90; Between -30 deg and 10 deg use SAE 80; Below -30 deg use SAE 75.

Rambler 195 & 250; Use SAE 90 all year; In extreme cold use SAE 80.

Studebaker 169 & 259: Use SAE 90 all year.

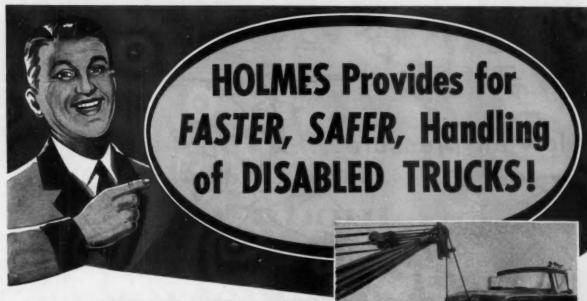
Superba 226: Use SAE 90 all year.

Valiant 170: Above -10 deg use SAE 90; Between -10 deg and -30 deg use SAE 80; Below -30 deg use SAE 75.

001

Moving Van Driver: "I don't care how sexy, how stacked and how easy that new waitress is over at Danny's Dandy Diner . . . I'll never date her!" Tanker Driver: "Why not?"

Moving Van Driver: "'Cause she treats men like dirt! When her husband comes home, she hides them under the bed!"



New TRUCKMASTER TOWING-HITCH Simplifies HEAVY-DUTY Work ▶

The New HOLMES Towing Hitch was designed for Extra Heavy Duty work and, when installed on a suitable Wrecker provides a very FAST, SAFE means of handling—even the largest and heaviest trucks.

The TRUCKMASTER greatly simplifies the hookingup and towing of Big, Bulky Trucks, Busses, and Trailers that are now extremely difficult to handle. With the new HOLMES Towing Hitch, the initial positioning of the wrecker to a disabled vehicle is not critical, and the hookup can be made with considerable speed. This is made possible by Heavy Duty, Telescopic Spacer Bars which automatically snap into locked position as the truck is raised, thereby assuring extra security and mobility of action for Towing.

Assures Maximum Security and Maneuver-a-bility for TOWING

When in-tow, the disabled vehicle is forced to track perfectly without swaying or jamming into the tow truck. Towing from an apex behind the wrecker provides a sharp turning radius which permits the disabled vehicle to be backed into close places with the same ease as a trailer. The TRUCKMASTER is furnished with V-type Spacer Bars, Mounting Brackets, and a set of 8 ft. chains with hooks. Send today for full details.

HOLMES 650 WRECKER





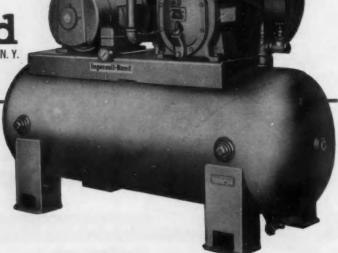
EVERY TIME one of your men uses an air tool or piece of air-operated equipment at low air pressure, you're losing productivity and profits. Low air pressure at the tool is usually caused by an inadequate compressor and is, by far, the biggest thief of efficiency and a major cause of shrinking profits.

THE INGERSOLL-RAND Type 30 Air Compressor is built to give you reliable air power for all your needs. These compressors are recognized and recom-

mended throughout the industry for low-cost operation and reliability . . . Check with your local Ingersoll-Rand Jobber today. He'll be glad to point out why this is true.

Ingersoll-Rand
11 Broadway, New York 4, N. Y.

Ingersoll-Rand Type 30 Air-Cooled Air Compressor ½ through 20 hp



HOW BIG ?

MOM SMALL? HOW HEAL. What you should know about diesel horsepower HOM SNOTA today!

> A non-technical discussion of diesel engine horsepower for the truck operator...and some sound advice on diesel engine design.

As legal load limits and performance requirements increase, truck operators face a welter of horsepower claims - claims that promise increased load-moving ability at lower cost . . . but claims unsupported by years of proved performance.

Remember, however, that higher horsepower can be costly! It can involve increased weight and bulk, which increase BBC dimensions unless accessibility, driver comfort or maintenance costs are sacrificed, Other penalties include smoke limits above acceptable standards, questionable in light of smoke-abatement programs and engine efficiency . . . higher fuel consumption, a penalty that defeats one of the basic advantages of diesel operation...or shortened engine life.

Obviously you can't have everything. But you can strike a satisfactory balance. You can operate a diesel engine that provides top horsepower output without sacrificing performance or economy. You can-if you know what to avoid and what to look for. Ask yourself these important questions:

Q: Will a larger-size, heavier engine of greater piston displacement produce greater horsepower?

A: Generally it will—but at the penalty of less payload and cubage. Naturally when piston displacement is increased by the use of larger and heavier engine blocks, it is possible to secure higher horsepower.

But truck manufacturers today have spent, and are continuing to spend, hundreds of thousands of dollars to reduce size and weight. They're shrinking bumper to back of cab dimensions to permit you to haul greater cubage trailers, and they're reducing tractor weight so that you can haul more payload within permissible weight limits. Of course, you cannot have the increased horsepower of a larger displacement engine without bulk which, in the case of conventional units, decreases accessibility.

Q: Since larger displacement may not be the answer to increased horsepower, how about the smaller, lighter diesels utilizing the two-stroke principle?

Only the Mack Thermodyne diesel sets the standard with full-measure performance

The high-performance diesel engine that meets the qualifications outlined on the preceding pages is not theoretical . . . it is in constant daily use in every type of hauling operation the world over. It is the world-famous Mack Thermodyne diesel Model END 673.

Proved in years of actual service, the Mack Thermodyne meets all the requirements that comprise the most efficient diesel engine. Its engineering and construction features have been pioneered by Mack and have proved themselves in service, setting the standards by which competitive engines are evaluated.

Listed here are the engineering principles that dictate how the most efficient diesel engine is designed and built...by Mack.

The Mack Thermodyne diesel is moderate in both size and weight. Its displacement of 672 cu. in. is great enough to provide high horsepower output without sacrificing chassis weight . . . without increasing bumper to back of cab dimensions . . . and without sacrificing accessibility.

The Mack Thermodyne diesel operates at moderate piston speeds. Its 1500 to 2100-rpm operating range means the Thermodyne has a wider range than some competitive engines, eliminating the need for excessive gearing and minimizing dangerous low-speed lugging.

The Mack Thermodyne diesel operates with the lowest exhaust smoke density, thanks to Mack's Air-Swirl combustion system which provides the highest thermal and volumetric efficiency of any present-day engine. Where other engine makers inject more fuel to increase horsepower, thus producing excessive smoke, Mack extracts more horsepower from less fuel.

The Mack Thermodyne diesel uses only one exhaust and one intake valve per cylinder, which maintain high volumetric efficiency because exclusive Mack Durafaced valve lifters permit larger, higher-lift valves to be used, operating at higher rates of acceleration. No complex, expensive-to-maintain multiple valving is needed.

The Mack Thermodyne diesel, rated at a conservative 170 hp using standard SAE diesel correction factors, with all accessories operating, delivers only slightly less than its rated horsepower to the flywheel. Its net horsepower of 160 is attained at remarkably low fuel consumption—.36 lb. per bhp/hr. at 1500 rpm to only .395 lb. per bhp/hr. at 2100 rpm—unmatched economy throughout its wide usable operating range.

The Mack Thermodyne diesel loses minimum horsepower to accessories and to exhaust heat, thanks to its high thermal efficiency. No complicated and expensive modulating fans are needed. Horsepower loss to the fan, for example, is only 3½, while fans of some competitive engines draw over twice as much. Exhaust temperature of the Mack diesel at wide open throttle is only 1150 deg. F., as against exhaust temperatures of competitive engines that run as high as 1300 deg. F.

The Mack Thermodyne diesel requires minimum maintenance because it is designed in accordance with accepted engineering standards that have been thoroughly proved. Its four-stroke design means lower average piston and head temperatures and less strain on moving parts.

Mack Turbocharged Thermodyne diesel for higher horsepower output

For those applications requiring greater output than the 170 horsepower of the naturally-aspirated Model END 673 without excessive size and weight, Mack offers the 205-hp Turbocharged Thermodyne diesel. The Turbocharged Model ENDT 673 offers truck operators the true horsepower of its companion engine, but in a higher range . . . the same rugged construction.

Its turbocharger, being driven by exhaust gases alone and not by gearing, drains off far less accessory horsepower than gear-driven superchargers.

Mack's four-inch turbocharger is oil cooled by engine lubricating oil, and turbine and blower are in a compact unit adding little to engine weight.

Engine lubricating oil is water cooled and is thoroughly cleaned every cycle by full-flow filtration to prolong engine and oil life.

For increased performance and unexcelled fuel mileage, as well as a long, trouble-free operating life, the Mack Turbocharged Thermodyne diesel is the logical choice of truck owners requiring a higher-powered engine without excessive bulk.

PROVED the most economical diesel over many years of operation in the vehicle

The true measure of a diesel engine is proved by operation in the vehicle in hundreds of thousands of miles. Laboratory testing is not enough!

Only the Mack Thermodyne gives you the proof . . . only the Mack Thermodyne diesel is:

- Proved by fuel and upkeep figures—many of them published—of leading truckers using Mack diesels.
- Proved by operators who have made it the most popular automotive diesel engine ever produced in this country.

 Proved by the fact that today there are twice as many Mack diesel-powered trucks in operation as any other make . . . more than the next two makes put together.

This proof of leadership in the diesel engine field is the reason the Mack Thermodyne diesel is the one diesel engine that sets the standards of performance and operation life by which all other truck diesels are judged . . . the key reason, too, Mack leads in diesel truck sales—No.1 in diesel truck sales for seven straight years.

MACK FIRST NAME FOR TRUCKS

Mack Trucks, Inc., Plainfield, New Jersey . Mack Trucks of Canada, Ltd., Toronto, Ontario

MACK
for over 7 straight years
NO. 1
by far in sales of
diesel trucks

A: Certainly, two-stroke diesels can produce more horsepower per cubic inch displacement than those of the four-stroke type and, therefore, the engine of comparable horsepower can be lighter and smaller. However, because the reciprocating parts are subjected to twice the workload of those in a four-stroke engine, engine life must obviously be reduced and maintenance costs increased.

Q: Well then, out of a given displacement engine is it possible for a manufacturer to obtain more horsepower?

A: Certainly, by increasing the amount of fuel injected on each power stroke—but then you pay the double penalty of increasing fuel consumption and heavy exhaust smoke.

Q: Isn't there an optimum engine size that overcomes the problems of both bulky and small engines?

A: Very definitely. The balance is an engine of moderate size and weight which has been engineered to handle specific gross weights without sacrificing low maintenance costs and long life, producing ampie usable horsepower with low specific fuel consumption and acceptable exhaust smoke.

Q: Can every engine manufacturer provide high horsepower from such an optimum engine?

A: No, for very definite reasons. Before it can produce maximum horsepower for moderate displacement, an engine must possess a high degree of thermal efficiency—which means it must extract from every ounce of fuel as much of the latent heat as possible.

Q: How can high thermal efficiency be achieved?

A: Through high volumetric efficiency, or breathing capacity, and a combustion system which converts into power the maximum amount of latent energy in the fuel. To increase volumetric efficiency, some manufacturers use two intake and up to four exhaust valves, complicating the valve system and making it difficult and expensive to maintain.

Q: After taking the items of size and weight into consideration, do I choose an engine on the basis of its rated horsepower?

A: Definitely not. Rated horsepower is by no means indicative of the actual power the engine will produce at the flywheel in a chassis. Neither will it be indicative of its fuel consumption.

Q: What then is rated horsepower?

A: Rated horsepower is the horsepower produced by an engine on a dynamometer in the manufacturer's laboratory. It is tested without such engine accessories as generator and air compressor, with no fan and with only the water pump operating. Then, so that rated horsepowers may be on a comparable basis, the power output is corrected to standards established by the Society of Automotive Engineers.

Q: Do all manufacturers use the same correction factors?

A: No. To secure a higher rating for promotional purposes, some manufacturers use correction factors that show more favorable output ratings.

Q: If rated horsepower does not indicate an engine's true performance, what is a more realistic indication of its output?

A: Net horsepower, or, to use a better term, usable horsepower. But it should be pointed out that even net horsepower, which is the horsepower of an engine minus the parasitic horsepower consumed by all of the accessories, does not indicate the true horsepower of the engine at the flywheel when operating in a chassis. The reason: correction factors are idealistic and can seldom be attained in a chassis. The air intake when it enters the combustion chamber is usually hotter than the 60 or 90° temperature used by manufacturers to plot their power curves. The hotter the air, the thinner it is, and the breathing capacity is reduced. In addition, no truck runs at sea level all of the time, and altitude also reduces the breathing capacity of the engine because air is thinner.

Q: How then can one judge the horsepower an engine will actually produce in a chassis?

A: By putting it on a chassis dynamometer, although this isn't always practical. However, it is possible to get a fairly good impression of the efficiency of an engine by observing the diameter of the fan, the pitch of the blades, the size of the radiator, the capacity of the cooling system, and the temperature of the exhaust. Naturally, the smaller the fan, the less the capacity of the cooling system, and the cooler the exhaust for a given horsepower output, the more efficient the engine because it is not wasting as much of its heat but is instead converting more of the latent energy of the fuel into useful work. In other words, the greater the loss of horsepower through parasitic waste, the less efficient the powerplant—not only because less usable horsepower is produced, but also because specific fuel consumption is increased. To overcome excessive parasitic horsepower loss, some manufacturers must rely on complicated modulating fans which cut out at higher rpm's-proof of lower thermal efficiency.

Q: In addition to horsepower, economy, low maintenance costs, size and weight, what other factor should be considered?

A: Range of operating speeds, which must be such as to provide maximum engine flexibility without lugging. This is achieved by having as high a governed speed as is possible with piston speed kept within good standards of engineering practice.

What diesel engine is of optimum displacement and designed to meet critical present-day demands? The next two pages tell the story...

CHECK YOUR FACTS

STATISTICS

SECTION

TRUCKS

Total Registrations	266
Tonnage257,	258
Highway-Use Taxes	
Vehicle Travel	
New Registrations	
Factory Sales	
Fuel Use	258
Tire Shipments	
TRAILERS	
Registrations	266
Production	266
Shipments	270
BUSES	
Registrations	266
Transit Riders	
Intercity Passenger Miles	
Highway-Use Taxes	
Vehicle Travel	
Factory Sales	270
Transit Equipment Delivered	
Fuel Use	
Tire Shipments	

TOTAL TRUCK REGISTRATIONS

They're up 3.3 per cent

Year	Unite G
1904	
1906 1907 1908 1908	1,100 8 1,700 5 3,100 8 6,060 9
1910	10,000 6
1011	

TOTAL TRUCK REGISTRATIONS BY STATES

TRUCK DATA

California, Tex	as and	Pennsylvania	are	top	three
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Alabema		1959	1958	1957	1958	1955
Antonia 11, 629 10, 800 Artzania 117, 176 105, 533 96, 637 90, 600 85, 755 Artzania 117, 176 105, 533 96, 637 90, 600 85, 755 Artzania 117, 176 105, 533 96, 607 182, 402 181, 674 177, 627 California 191, 77, 788 824, 270 840, 202 806, 720 744, 622 Calorado 180, 600 184, 219 177, 648 162, 745 183, 286 Cannacticul 100, 835 100, 248 110, 228 102, 404 104, 608 Dalaware 41, 688 36, 620 35, 424 33, 219 22, 211 District of Columbia 177, 988 17, 374 17, 780 19, 400 19, 387 Florida 280, 788 278, 662 280, 673 282, 733 231, 607 Cecorgia 280, 608 271, 623 247, 685 260, 574 236, 753 Idisho 97, 584 91, 522 86, 600 84, 307 67, 471 Illinois 430, 500 436, 276 434, 755 Illinois 430, 500 436, 276 434, 755 Illinois 336, 560 322, 238 320, 600 324, 434 304, 457 Isova 281, 573 222, 585 224, 685 282, 682 281, 682 Indiana 336, 560 322, 238 320, 600 324, 434 304, 457 Isova 281, 573 222, 585 224, 685 282, 682 281, 682 Kantucky 280, 600 324, 430 322, 584 284, 584 Kantucky 280, 600 324, 430 322, 584 284, 584 Kantucky 280, 600 324, 430 322, 584 284, 584 Kantucky 280, 600 290, 881 Laulslama 2715, 748 296, 724 295, 217 196, 572 194, 984 Maryland 147, 168 130, 519 135, 479 133, 884 129, 220 Maryland 147, 168 130, 519 135, 479 132, 884 129, 220 Maryland 147, 168 130, 519 135, 479 132, 884 129, 220 Maryland 177, 527 175, 527 180, 567 27 194, 574 285, 674 28	Alabama	209,920	199,050	198,709	191.754	185,087
Artzannas 117,176 106,533 96,637 90,000 85,785 Artzannas 196,376 185,007 182,402 181,674 177,627 California 097,786 824,270 840,202 806,720 744,020 California 180,600 184,219 177,048 186,735 183,286 Cannacticul 100,835 100,248 110,203 102,404 104,080 Delaware 41,686 38,620 35,424 39,219 29,211 District of Calumbia 17,986 17,374 17,760 19,400 19,357 Florida 280,726 276,662 290,678 292,733 231,607 Florida 280,726 276,662 290,678 292,733 231,607 166,000 49,360 49,367 67,471 1811nole 820,726 276,662 286,000 44,307 67,471 1811nole 830,600 436,276 434,755 412,000 376,274 1811nole 830,600 436,276 434,755 412,000 376,274 1811nole 830,600 436,276 434,755 412,000 376,274 1811nole 830,600 221,458 292,233 280,000 274,459 212,334 290,434 294,457 1993 221,573 222,836 218,100 214,860 211,768 Kantucky 230,000 274,469 212,334 290,800 214,768 Kantucky 230,000 274,469 212,334 290,800 208,881 Leuislana 275,746 290,773 39,70,243 71,440 74,366 Malva 17,168 130,819 30,843 71,440 74,366 Malva 17,168 130,819 30,819 30,843 71,440 74,366 Malva 17,168 130,819 30,843 71,440 74,366 Malva 17,168 130,819 30,8	Alaska	18,829		******	******	
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California	AFKANSAS	195,378	185,007	182,402	181.574	
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Centracticus	Cotorado	188,600	184,219	177,848		163,266
Delayied of Columbia 17, 986 17, 374 17, 780 19, 400 19, 387 19, 401 19, 387 1	Connecticut	100,835	100,248			
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Centrols 250,728 276,662 250,673 252,733 231,607	District of Columbia.	17,988	17,374	17,750	19,400	19,387
daho	Plurida	290,728	276,662			231.807
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Involue	Idaho	97,584	81,822	86,000		87,471
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New York	Westand	106,343	96,731	101,177	100,001	100,524
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Washington 241,608 220,900 211,838 214,881 206,007 West Virginia 129,527 120,577 130,000 114,000 110,957 Wisconsin 243,708 243,470 244,010 225,046 224,003						
Wisconsin		220,539		218,706		
Wisconsin	Washington					
224,000	The state of the s					
wyoming 60,000 55,288 63,623 62,176 51,127	***					
	** yourned	60,000	55,286	63,623	62,176	51,127

TOTAL TRUCK REGISTRATIONS BY MAKE AND MODEL YEAR

Total 11,048,611 10,696,278

Chevrolet, Ford and International lead the list

Make	1969	1958	1957	1956	1955	1954	1953	1902	1951	1950	1949	1948	1947	1946	Prowar*	Total
Autocar Breckway Chevrolet Diamont T Divec Dedge Federal Ferd GMC International Mack Ree Studebake White-Sterling White-A Aut Others	703 203,172 1,815 1,530 28,389 61 178,699 48,957 65,982 8,282 3,670 8,316 11,347 19,142	940 221,264 2,920 2,204 34,567 61 183,909 43,361 61,307 10,678 4,624 10,818 11,474 21,200	827 258,828 3,246 2,494 51,361 76 220,926 57,369 12,498 2,279 8,552 11,579 11,945 14,567	922 212,782 3,466 3,238 85,074 62 328,088 83,456 97,141 12,253 2,580 7,481 13,092 9,986 11,370	1,068 368,903 3,144 3,296 88,916 76 252,548 68,740 98,316 9,834 2,435 12,241 11,913 10,714 8,877	981 1,367 246,567 2,300 2,626 51,147 253 195,531 49,063 78,571 5,096 1,974 5,093 9,170 7,828 6,063	1,161 1,599 2772,419 2,7704 2,672 77,634 568 225,902 80,900 74,670 8,268 2,809 23,437 8,265 13,456 6,601	1,086 1,271 237,890 2,430 2,430 2,430 7573 170,843 65,042 85,390 8,214 2,280 23,407 7,963 10,610 6,437	1,505 1,906 328,583 3,013 3,006 75,443 682 220,466 74,172 82,035 7,096 2,106 28,988 8,955 19,605 7,727	1,176 1,550 335,957 2,960 4,016 80,353 580 254,743 84,010 67,632 5,849 1,784 28,210 7,669 14,850 6,795	882 854 298,415 2,518 2,999 83,361 512 154,090 53,202 68,440 3,756 1,880 51,196 4,359 16,069 5,997	1,386 1,273 210,840 4,630 4,446 74,496 1,254 155,640 48,177 74,301 4,575 14,792 5,768 29,716 6,379	1,889 1,538 123,314 3,613 3,925 61,611 1,389 95,405 24,612 62,588 8,590 2,924 19,537 8,679 13,231 6,678	1,741 1,186 130,500 1,460 2,570 80,904 903 82,715 11,542 39,433 1,761 2,296 10,918 3,418 11,028 4,941	3,486 1,565 236,075 5,792 3,543 90,614 1,614 213,070 86,810 8,642 3,406 5,485 7,791 7,745 24,253	16,318 18,221 3,681,500 46,010 46,848 987,788 8,563 2,930,641 107,002 33,300 243,833 125,584 199,700
Totals	888,105	629,527	742,020	840,993	908,011	061,229	901,193	709,090	881,874	906,233	718.531	642.621	433,731	206,197	744,490	10.532.14

Based on data from Rouben H. Donnolley Corp. as of July 1, 1959.

* Includes those unidentified as to model year.

TRUCK AND BUS FACTORY SALES

'59 adds a million more

Year	Units		Average Wholesale Price
1904	700	\$1,272,747	\$1,818
	750	1,330,000	1,773
1906 1907 1908 1909	900 1,000 1,600 3,297 6,000	1,440,000 1,780,000 2,880,000 8,333,663 9,660,000	1,800 1,780 1,700 1,618 1,610
1911	40,000	21,000,000	1,966
1912		43,000,000	1,954
1913		44,000,000	1,872
1914		44,219,006	1,776
1915		128,800,000	1,700
1918	92,130	161,000,000	1,747
1917	128,157	220,962,668	1,724
1918	227,250	434,168,992	1,910
1919	224,731	371,422,820	1,653
1820	321,789	423,249,410	1,315
1921	148,052	166,070,810	1,122
1922	209,991	226,040,658	837
1923	409,295	306,537,929	764
1924	416,059	318,580,580	765
1925	530,059	488,400,277	864
1928	516,947	462,123,435	875
1927	464,783	420,130,624	904
1928	583,342	460,108,903	730
1929	881,909	622,533,887	706
1930	578,364	390,752,061	679
1931	432,262	285,444,618	614
	228,303	137,624,157	603
	329,218	175,380,963	533
	570,205	326,781,686	567
	697,367	360,997,330	546
1936	782,220	483,719,486	883
1937	891,016	637,314,633	803
1936	488,841	329,917,646	675
1939	700,377	489,786,701	899
1940	754,901	567,820,144	752
1941	1,080,820	1,069,790,865	1,008
1942	818,082	1,427,486,801	1,744
1943	690,689	1,451,794,475	2,076
1944	737,524	1,700,928,939	2,306
1945	665,683	1,161,955,532	1,803
1948	940,898	1,043,247,278	1,100
1947	1,239,443	1,731,713,000	1,397
1948	1,376,274	1,880,475,000	1,366
1949	1,134,185	1,394,035,000	1,229
1950	1,337,193	1,707,746,000	1,277
1951 1952 1963 1954	1,426,828 1,218,165 1,206,286 1,042,174 1,249,090	2,323,859,000 2,319,769,000 2,009,000,000 1,660,019,000 2,929,973,000	1,629 1,904 1,732 1,593 1,618
1958	1,104,481	2,077,432,000	1,881
1957	1,107,176	2,062,723,000	1,881
1958	877,294	1,730,027,000	1,972
1959	1,137,401	2,350,000,000	2,066
56 Years	32,210,120	\$42,053,320,704	*****

INTERCITY TRUCK TONNAGE INDEXES

		,		11 00	10 011		200010	ine	Dase
1950 137	1951 143	1952 148	1963 155	1954 149	1956 171	1956 177	1987 178	1988 178	1959 ¹ 199
	Centr	al re	gion :	shows	most	gain,	up 18	per	cent
122 133 149 134 123	126 142 141 158 134	128 141 148 172 133	135 150 152 186 143	134 141 135 102 147	140 165 161 224 163	163 171 168 229 173	155 174 149 243 163	182 100 140 258 190	164 189 165 296 214
	122 133 149 134	137 143 Centr 122 126 133 142 148 141 134 158 123 134	137 143 148 Central re 122 128 128 133 142 141 148 141 148 134 188 172 123 134 134	137 143 148 155 Central region 122 128 128 135 133 142 141 156 140 141 149 152 134 138 172 186 123 134 133 143	Central region shows 122 128 128 135 134 133 142 141 156 141 140 141 140 152 135 134 158 172 165 182 123 134 133 143 143	137 143 148 155 149 171 Central region shows most 122 128 128 135 134 140 133 142 141 150 141 155 140 141 149 152 135 161 134 158 172 165 182 224 123 134 133 143 147 155	137 143 148 155 148 171 177 Central region shows most gain, 122 128 128 135 134 140 183 133 142 141 180 141 185 171 140 141 148 182 135 181 188 134 158 172 180 182 224 228 123 134 133 143 147 185 179	Central region shows most gain, up 18 122 126 128 135 134 140 153 155 133 142 141 150 141 156 171 174 140 141 140 152 135 161 168 160 134 158 172 166 162 224 229 263 123 134 133 143 147 165 172 185	137 143 148 155 149 171 177 178 178 Central region shows most gain, up 18 per 122 128 128 135 134 140 153 155 182 133 142 141 150 141 155 171 174 169 140 141 140 182 135 161 188 140 140 134 158 172 165 182 224 229 243 256 123 134 133 143 147 165 179 182 180

BY COMMODITIES

D. Commodities										
	Moto	r vel	hicles	have	best	increa	se, up	36.3	per	cent
General Freight	146	146	186	158	180	171	178	178	173	202
Household Goods	117	148	167	178	178	199 205	216	235	242	268
Heavy Machinery	108	134	153	174 151	184	205	212	210	198	228
Liquid Petroleum Products	123	134	143	151	158	171	181	186	183	204
Refrigerated Liquids	129	121	129	130	140	162	148	100	199 193 159	166
Refrigerated Solids	149	121 168	186	198	193	211	244	270	274	294
Agricultural Commodities	105	123	116	111	112	122	191	140	189	202
Motor Vehicles	150	148	153 143 129 185 116 134 241	161	137	171 162 211 122 196	156	178	180	183
Building Materials	152	214	241	220	213	252 116	290	225 126	218	207
Film & Associated Commodities	114	114	126	113	108	116	290 120	128	123	3
All Other Commodities	143	164	158	175	140	172	180	180	175	198

Compiled by American Trucking Aseas from reports of ICC Class 1 Common and Centract Intercity Carriers of Properly Indexes are based on 1947–49 average — 100. 1 Indexes by commodities for 1959 are tentative. 2 Included with "All Other Commodities for 1959 are tentative. 2 Included with "All Other Commodities for 1959 are tentative.

TOTAL TRUCK REGISTRATIONS BY GVW

Chart is based on 1954 registrations

	5	itraight Truck	•	Combi	All	
Registered GVW	2-axle, 4-tire	2-axie, 6-tire	3-axio	Tractor- Semitration	Truck- Trailer	Trucks
6,000 lb. and under		1.940% 3.480 4.800 5.000 7.440 4.380 1.615 0.665 0.700	0.280% 0.300 0.200 0.300 0.735	0.330% 0.330% 0.825 0.418 0.925 2.175 8.000	*********	84,740% 9,600 7,300 6,000 8,000 8,000 2,700 1,500 2,400 2,700 100,006

Source: Bureau of Public Roads based on 1954 registrations.

TOTAL TRUCK REGISTRATIONS BY AGE

Average age continues to increase, is now 7.48 years

	1959			1950			-1957	-	1855			
		% of	Total		% of	Total		% of	Total		% of	Total
Age in Years	Units	Simple	Cumul.	Units	Simple	Cumul.	Units	Simple	Cumul.	Units	Simple	Cumul.
Under 1	566,105	5.39	5.30	395,829	3.95	3.95	406,138	4.18	4.18	408,692	8.14	5.14
1-2	629,527	6.00	11.39	742.912	7.41	11.28	840,858	8.66	12.84	923,404	9.71	14.85
2-3	742,020	7.07	18.46	848,399	8.46	19.82	918,848	9.46	22.30	688,828	7.24	22.00
3-4	840,993	8.01	26.47	914,163	9.12	28.94	675,750	6,96	28.26	843,687	8.87	30.96
4-8	908,011	8.65	36.12	669,355	6.68	35.62	819,688	8.44	37.78	783,474	8.03	38,99
0-0	061,229	8.30	41.42	811,948	8.10	43.72	738,951	7.61	45.31	933,100	9.81	40.80
6-7	801,193	7,63	49.05	723,900	7.22	50.84	800,406	9.26	84.87	1,011,200	10.64	99.44
7-0	700,500	6.76	85.81	878,388	8.76	89.70	969,071	9,98	64.55	831,842	8.78	66.19
8-0	861,674	8.21	64.62	936,031	9.33	80.03	787,581	8.11	72.66	780,457	8.30	76.49
0-10	906,233	8.63	72.65	750,521	7.48	76.82	727,784	7,48	80.14	676,700	8.67	82,56
10-11	718,531	6.84	79.49	679,820	6.78	83.30	510,350	5.32	86.46	501,353	6.27	67.83
11-12	642,621	6.12	85.61	467,943	4.67	87.97	446,414	4.60	90.00	96,536	1.02	80.00
12-13	433,731	4.13	89.74	397,158	3.96	91.93	85,327	.86	90.94	38,548	.41	80,26
13-14	366,197	3.49	93.23	75,483	.78	92.68	33,135	.34	91.28	14,041	.18	89.41
14-15	69,865	.06	93.00	20,235	.29	92.97	13,111	.13	91.41	130,301	1.87	80.76
10-10	27,500	.26	94,18	12,377	.12	93.09	111,786	1.18	92.00	258, 296	2.00	93.44
10-17	13,229	.13	94.28	97,320	.97	94.08	213,678	2.20	94,78	104,000	1.78	95.17
17-18	90,167	.86	95.14	181,068	1.81	95.87	135,968	1.40	96.16	111,000	1.18	90,30
10-10	108,574	1.82	96.66	113,804	1.13	97.00	91,321	.94	97,10	00,447	.73	97,00
19 and older	349,040	3.34	128824	300,934	3.00	*****	281,689	2,90	Bexard	278,134	2.82	*****
Total	10 497 430	100.00	100.00	10.026.577	100.00	100.00	9,712,864	100.00	100,00	9 607 041	100.00	100.00
Age not known	35,115	100.00	100.00	29,990	100.00	100.00	63,006			38,141		
Alle not known	30,110	******	CALERY	20,000	******	*****	00,000	******		00,171	272444	221755
Total in use	10.532,145			10 056 587			9,775,950			9 544 062	2-222	
Average age of known models			*****	7,22 yrs.	******	******	6.97 yrs.	A10 400 FT	*****	8.74 yrs.	*****	*****
transfer after or without manager	. ran hear			rice yes			orac lear			and here		

Based on data from The Rouben H. Donnelley Corp. as of July 1 of each year.

TRUCK DATA

FACTORY SALES OF SPECIAL TYPES OF VEHICLES

All but motor coaches show gain in '59 over '58

Type of Vehicle	1959	1956	1967
Station Wagene ¹	955,433	706,414	918,371
Motor Coaches ²	2.543	3,016	3,833
School Bus Chassis	24,850	19,719	23,485
Trucks with Cab-ever-Engine	64.713	40.734	53,053
Trucks with Diesel Engines	33,106	25,172	24,458
Trucks with 6 wheels, 3 axies	30.626	19.264	25,684
Multi-Step Trucks		22.384	24,801

Source: Automobile Manufacturers Ason. 1—On both passenger car and truck chassis.

2—Including integral school buses.

DIESEL TRUCK FACTORY SALES

	U. S. DOMESTIC MARKET											
Year	10,001- 14,000 lb.	14,001- 16,000 lb.	16,001- 19,500 lb.	19,501- 28,000 lb.	Over 26,000 lb.	Total						
1964			137	126	8,488	8,781						
1956	*****		48 21	228 594	14,576	14,847						
1967	*****	****	*****	344	20,723	21,067						

Source: Automobile Manufacturers Asen.

Lighter weights go to other than domestic market

	TOTAL FACTORY SALES-												
10,001- 14,000 lb.	14,001- 16,000 lb.	10,001- 19,500 lb.	19,501- 26,000 lb.	Over 26,000 lb.	Total								
*****	23	146	406	9.971	10,646								
*****	116	67	401	16,302	18,878								
****	459	246	1,118	23,977	25,797								
****	26	345	682	23,432	24,456								
	4	78	254	29.528	20.172								

SPECIAL TRUCK TAXES

Trucks paid \$2.7 billion for highway use in '59

	State Registra- tion Fees ¹ (000)	State Motor Carrier & Trailer Fees ¹ - 2 (000)	State Gasoline Tax ³ (000)	Special City & County Taxes ⁴ (000)	Bridge, Tunnel, Ferry, Road Tolls ⁴ (000)	Sub-Total (000)	Federal Excise Taxes ⁵ (000)	Total Special Taxes (000)
1958	\$444,220	\$133,109	\$711,978	\$39,500	\$73,000	\$1,461,807	\$824,574	\$1,926,381
	482,807	144,426	774,381	42,000	\$3,000	1,536,614	655,365	2,191,979
	499,776	152,280	796,322	42,200	115,000	1,606,578	817,549	2,423,127
	512,073	153,586	819,250	44,900	128,000	1,657,811	779,259	2,437,070
	635,000	165,000	852,000	48,000	143,000	1,743,000	934,000	2,677,000

VEHICLE TRAVEL AND FUEL USE

Trucks and combinations average 7.96 miles per gallon

		Pas	senger vehi	icles				
			Buses ²		All passenger vehicles	Trucks and combina- tions		
	Passenger cars and moter- cycles ¹	Com- mercial	School and non-revenue	All buses			All motor vehicles	
Motor-vehicle travel; (million vehicle-miles) Main rural reads. Local rural reads.	208,365 72,888	910 150	567 574	1,477	209,842 73,612	55,355 18,775	285,197 92,387	
All rural reads	261,253 263,620	1,060	1,141 ° 255	2,201 2,100	283,454 285,729	74,130 41,340	357,584 307,069	
Total travel	544,873	2,914	1,396	4,310	549,183	115,470	664,653	
Number of vehicles registered (thousands)	57,392 9,494	84 34,690	186 7,505	270 15,963	57,062 9,524	11,159 10,348	68,821 9,658	
Fuel consumed (million gallons) Average fuel consumption per vehicle (gallons).	38,095 664	618 7,357	191	809 2,996	38,904 675	14,514	53,418 778	
Average miles traveled per gallon of fuel consumed	14.30	4.72	7.31	5.33	14.12	7.98	12.44	

1959 INTERCITY TRUCK TONNAGE

Increase of 13-1 per cent takes tonnage to a new high

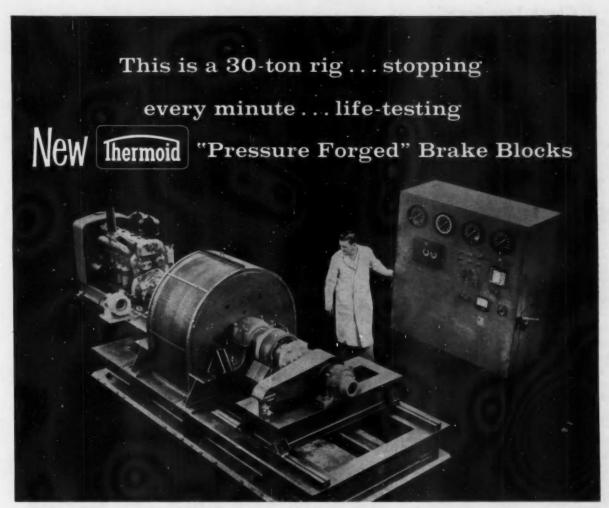
Region	1959*	1988*	Per Cent Change
New England	18,382	17,070	+ 7.7
	72,604	64,632	+12.3
	99,541	84,311	+18.1
Southern	48,357	42,250	+14.5
	18,363	16,871	+ 8.8
	22,162	19,886	+11.4
Southwestern. Recky Mountain. Pacific	28,570	28,704	+ 7.0
	12,539	11,184	+12.1
	38,033	34,136	+11.4
United States	358,562	317,043	+13.1

Commodity	1960°	1058*	Per Cent Change
General Freight	168,842	144,737	+16.7
Household Goods	1,657	1,494	+10.9
Heavy Machinery	3,632	3,171	+14.8
Liquid Petroleum	90,252	85,275	+ 5.8
Refrigorated Liquids	1,493	1,432	+ 4.3
Refrigerated Solids	3,397	3,165	+ 7.3
Agricultural Commedities	7.496	5.898	+27.1
Motor Vehicles	12.681	9.306	+38.3
Building Materials	9.336	9.838	- 5.1
All Other.	59,766	52,729	+13.3
Total	358,552	317,043	+13.1

^{*} In theusands of tons. Covering 2194 Class 1 and 2 intercity common and contract motor carriers of property as reported by American Trucking Assns. Research Dept. It does not represent total truck tomage.

By Commodities

By Regions



This 200 HP diesel dynamometer simulates the wheel load conditions at the drive axle of a 30-ton over-the-road tractor semitrailer rig. Automatic controls simulate all types of operating conditions, making an average of one stop per

minute. Life tests have been running continuously on new "Pressure Forged" brake blocks, day and night, for 21 months. The equivalent of nearly 3 million miles of highway truck operation.



No brake blocks ever got such grueling punishment on the road . . . punishment that proves the extra value of this new process.

The new Thermoid "Pressure Forged" process packs in more high-grade friction material to make a 19% denser block with greater uniformity. And it's this extra density and greater uniformity that pay off in safer stops and longer wear. Millions of miles of life test and actual use on the road prove that new Thermoid "Pressure Forged" blocks give you more miles per brake dollar for your fleet.

So, get the mileage you're paying for . . . start using new Thermoid "Pressure Forged" Blocks on your fleet. See your Thermoid distributor or write Thermoid Division, H. K. Porter Company, Inc., 200 Whitehead Road, Trenton 6, New Jersey.

THERMOID DIVISION



H.K.PORTER COMPANY, INC.

PORTER SERVES INDUSTRY with steel, rubber and friction products, asbestos textiles, high voltage electrical equipment, electrical wire and cable, wiring systems, motors, fans, blowers, specialty alloys, paints, refractories, tools, forgings and pipe fittings, roll formings and stampings, wire rope and strand.

NEW TRUCK REGISTRATIONS

Almost	_	-:llion	im	150
AIMOST	•	million	107	22

Year				Units
1935	*********		**********	B10,683
1936				611,644
			*********	618,249
			***********	365,349
			**********	486,748
1939			***********	550,150
1940		******	***********	000,100
				640,697
				77,422
			**********	62,469
			***********	121,200
			**********	350,932
1945	********		***********	300,032
****				625,249
				879,132
				1 008 174
				1,035,174
			ALTERNATION AND THE R.	961,961
1950				1,142,307
				1,003,850
1952	*******		***********	812,099
1953	********		***********	930,312
1954	********		***********	829,101
1955				\$57,001

Source: 1934 through March, 1942, and 1946 and later years compiled by R. L. Polk & Co. April, 1942 through July, 1945 data are W.P.B. and O.D.T. and represent certificates of transfer to civilian users.

TRUCK DATA

NEW TRUCK REGISTRATIONS BY MAKES

				Note	growth	in foreign	trucks
	1959	1958	1957	1956	1965	1954	1953
Autocar	1	1	1	1	1	1,041	1,713
Brockway	1,196	959	738	884	1,144	1,340	2,080
Chevrolet	305,837	247,470	290,960	302,145	329,701	293,079	327,960
Diamond T	3,007	2,929	3,472	4.037	3,897	2,701	3,398
Divco	2,900	2,165	2,556	3,112	3,298	2,505	2,569
Federal	52,107	37,037	40,431	57,651	88,208	60,658 248	82,345 986
Ford	292,338	208,787	277,301	263,753	295,900	287,799	286,027
F. W. D.	494	382	433	481	315	393	359
G. M. C.	69,431	55,950	62,165	82,266	84,877	66,644	82,298
International	106,828	89,745	96,956	108,014	100,441	84,222	95,404
Konworth	768	858	1,006	1,239	1,182	697	747
Mack	13,472	11,865	13,312	13,190	10,932	6,098	6,890
Peterbilt	623	414	497	800	424	344	332
Rec	1	.1	2,067	2,974	3,121	2,283	3,498
Studebaker	5,906	4,142	8,547	8,706	10,817	10,193	22,473
White	15,488 10,578	12,142	12,491 6,678	15,137 9,131	14,372	10,340	12,261
Willys-Jeep	20,050	7,744	15,327	14,357	10,441	7,598 9,925	9,247 8,465
All Other U. S. Trucks	1,047	790	10,327	1,218	947	545	986
Foreign Trucks	38,053	28,546	15,262	5,460	2,227	448	276
Total	940,181	726,704	858,065	894,366	957,001	829,101	930,312
t-Included with "	All Others".	:-Included	with White.		9	iource: R. L. Polk	& Co.

NEW TRUCK REGISTRATIONS BY STATES

California leads, Texas is second with New York third in '59

STATE	Brock- way	Chev- rolet	Dia- mond T	Dodge	Ford	G.M.C.	Interna- tional	Mack	Stude- baker	White	Willys Jeep	Wiffys Truck	All Others	Total
Alabama	1	7,480	62	855		4 700	4 000	499	-	989	71	111	770	19,799
Aleska			62		5,776	1,792	1,980	477	61	353			114	1,322
Alaska	*******	200	********	46	508	163	125	10	30	400	3	272	622	11.656
Arizona	********	4,406	4	848	3,402	973	863	49	84	107	125			
Arkansas		6,579	40	758	5,283	1,173	1,494	57	78	58	63	82	185	15,820
California	1	36,512	149	5,556	34,705	5,988	6.943	282	581	972	983	1,116	8,887	100,677
Colorado	*******	5.354	17	1,088	4.637	1,171	1.420	110	135	138	808	686	332	15,656
Connecticut	28	1,652	19	409	1,613	564	1,101	196	40	271	156	348	556	6,961
Delaware	15	730	27	183	503	257	404	338	14	48	19	42	116	2,696
District of Columbia	4	670	6						2			80	273	2,695
Clarks of Columbia				123	820	239	320	48		131		90		30,914
Florida	2	8,693	178	1,170	9,788	2,659	2,925	586	156	781	417	969	2,590	
Georgia		7,362	30	933	7,000	1,852	2.010	348	105	311	92	118	837	21,068
Idaho		2,239	8	822	2.040	677	1,148	56	105	47	96	334	200	7,581
Illinois		11.954	245	2.028	11,793	2.713	6,698	510	249	719	376	746	1,985	40,015
Indiana		7,754	141	1,437	7,466	2,044	3,751	560	477	570	139	360	930	25,629
		7,704									74	217	504	17,521
		5,666	158	884	5,686	972	2,969	122	130	140				
Kansas	********	6,626	49	763	8,024	1,207	1,977	72	130	103	49	173	273	17,448
Kentucky		5,217	18	544	4,401	1.362	1,495	120	61	134	114	160	362	13,907
Louisiana	1	7.877	28	646	6,993	1,450	1,919	175	67	150	108	110	702	20,250
Maine	17	1,306	12	252	1,491	385	999	85	28	44	191	286	297	8,394
Maryland	64	3,104	37	645	2,955	783	1.680	249	34	256	340	838	574	11,560
Macanhuntte	67	2,710		998					53	300	199	619	901	13,114
Massachusetts			32		3,775	1,216	1,814	340						
Michigan	2	10,946	210	2,547	12,001	3,104	2,876	422	159	541	405	826	1,671	38,770
Minnesota		5,328	57	1.082	6.041	1,081	2.524	151	132	142	44	196	566	17,325
Mississippi		5.064	9	560	4,325	1.307	1.526	104	76	27	- 69	75	333	13,465
Missouri		10,033	83	1,175	7,969	2,377	3,162	226	132	277	113	209	640	26,396
Montana		2,285	18	653		594	1,252	78	102	80	131	497	254	8,480
Mahanaka	*******				2,527							100	290	12,974
Nebraska	********	4,390	123	576	4,198	857	1,885	60	56	172	96			
Nevada		937	2	181	890	279	322	7	46	14	66	93	451	3,288
New Hampshire	4	757	3	253	741	164	430	100	28	22	121	280	278	3,140
New Jersey	321	5,120	200	1,346	6,000	1,905	2,934	835	77	748	248	617	1.522	21,871
New Mexico		4.112	14	640	3,100	920	690	49	80	59	125	226	216	10.231
New York	425	10,384	140	2,928	12,918	3,098	7,798	1,071	161	1,730	893	1.889	3,936	47.340
North Carolina	1	8,032								484	209	220	802	24,200
North Delete			86	1,009	8,556	1,980	2,105	800	144				88	5,460
North Dakota	*******	1,691	19	426	1,707	342	1,046	7	41		20	70		
Unio	41	9,764	154	2,471	11,322	2,773	4,854	690	256	1,150	468	1,064	1,917	36,924
Oklahoma		9,216	21	808	7,680	1,331	2.234	158	81	156	77	104	280	22,128
Oregon	011000000	4,363	77	757	3,974	948	1.575	182	192	470	195	551	726	14,010
Pennsylvania	192	10,155		2.937	9.914	2,701	6,401	1.632	280	1,249	833	1,725	1,841	39,380
Bhode Island	100		220						200		19	42	407	3,278
Rhode Island	*******	755	1	488	802	175	436	76	10	64				
South Carolina	DESCRIPTION OF THE PARTY OF THE	3,849	7	635	3,728	738	861	145	65	109	63	101	400	10,701
South Dakota		1,999	16	397	1,955	488	1.199	4	68	31	68	135	132	6,490
Tennessee		6,196	34	985	5,495	1,894	1.838	617	73	101	111	108	487	17,820
Texas	1	34,455	100	3,522	26,278	5.043	7,449	592	432	1.114	808	538	1,307	81,437
Utah		2,201	19	645				48	58	95	95	163	216	6,758
Varmani			10		1,924	583	710		00		148	232	202	2,800
Vermont	1 1	656	7	146	713	247	373	20	17	32				19.606
Virginia	2	5,436	23	1,203	7,364	1,141	2,007	325	162	177	272	640	857	
Washington.		4,561	20	1.023	4,588	1.477	1,685	130	114	127	117	345	921	16,108
West Virginia		2,320	40	795	2,216	788	751	232	82	140	273	501	267	8,408
Wisconsin		5.098	53	847	5,007	1.156	3,269	218	114	276	295	481	848	17,651
Wyoming		1.674		311	1,597	493	602	27	40	38	107	360	114	5.374
		1,024	11	311	1,587	493	902	21	40	30	101	500	114	0,014
	STORY TO CONTRACT PROPERTY	The second second second second		William Street William										
Total	1,196	305.837	3.007	52,107	292,338	69,431	108.828	13,472	5,906	15,468	10,576	20,050	41,985	940,181

Based on data from R. L. Polk & Co.

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TRUCK FACTORY SALES BY GVW

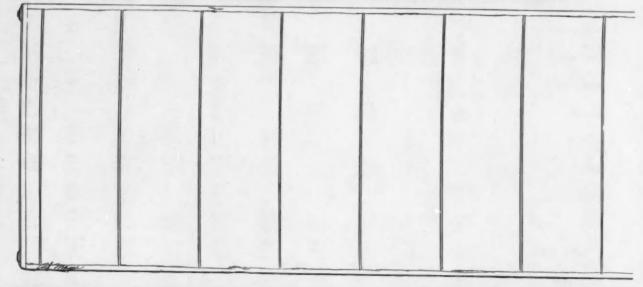
					Distribution by	GVW show	s little	change from	last year
	6,000 lb. and less	6,001- 10,000 lb.	10,001- 14,000 lb.	14,001- 18,000 lb.	16,001- 19,500 lb.	19,501- 26,000 tb.	26,001- 33,000 lb.	Over 33,000 lb.	Total
				Factor	y Sales				
1959 1968 1967 1958 1968	568,990 448,292 848,734 438,670 585,800	175,644 127,167 160,400 200,401 212,571	14,029 14,006 30,007 30,918 46,905	93,114 61,706 162,886 192,167 225,768	130,415 80,626 72,100 82,493 65,717	62,128 50,356 53,163 86,492 43,422	42,889 29,781 37,533 81,290 94,827	20,040 20,362 33,000	1,134,858 874,278 1,108,343 1,100,417 1,345,083
				Per Cent	of Total				
1950	50.1% 51.1% 40.8% 39.9% 47.0%	18.5% 14.5% 14.5% 10.0% 17.1%	1.2% 1.6% 3.3% 3.6% 3.8%	8.2% 8.4% 14.8% 17.8% 18.1%	12.3% 11.0% 8.6% 7.5% 6.3%	5,8% 8,8% 4,8% 5,1% 3,5%	3.8% 3.4% 3.4% 7.4% 5.2%	3.4% 3.2% 3.1%	100.0% 100.0% 100.0% 100.0% 100.0%

From data supplied by the Automobile Manufacturers Assn. **—Included with 25,001 to 33,000 group.

NEW TRUCK REGISTRATIONS BY MAKE AND GVW

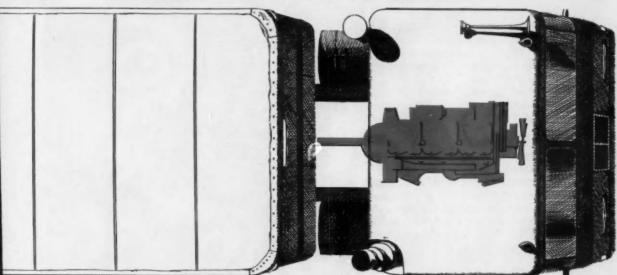
Make	Year	6,000 lb. or Loss	6,001- 10,000 lb.	10,001- 14,000 lb.	14,001- 16,060 lb.	Chevroles 16,001- 19,500 lb.	19,501- 26,000 lb.	28,001- 33,000 lb.	with the 33,001 lb. and Over	mosf Tetal
BROCKWAY	1959 1958 1957	******	*****	*****	*****	::::::	23 40 64	248 308 270	927 905 398	1,198 959 738
CHEVROLET	1959 1958 1957	192,622 148,407 174,211	44,298 40,344 48,970	8,337 8,737 10,011	52,818 42,941 82,398	8,065 7,041 6,640	******	******	******	305,837 247,470 291,130
DIAMOND T	1959 1958 1957	*****	*****	*****		65 137 182	588 848 1,343	2,128 1,044 1,576	228 300 370	3,007 2,929 3,475
DIVCO	1956 1956 1657	34 116 7	1,848 1,382 1,782	982 610 724	******	116 57 75	*****	*****	******	2,980 2,168 2,558
DODGE	1958 1958 1957	28,475 19,147 23,428	11,708 6,928 11,167	3 17 489	3,008 2,501 3,512	6,895 5,007 6,242	2,937 2,346 3,981	1,026 887 807	358 194 156	52,107 37,037 49,482
FORD	1980 1958 1967	164,865 118,488 183,895	45,609 31,500 40,162	9,501	10,986 7,875 45,211	80,580 36,075 9,142	14,790 11,396 5,664	2,440 1,882 1,904	2,980 1,983 2,002	202,338 206,787 277,861
FWD	1939 1958 1957	*****	*****	*****	2 22	10 10 35	31 56 83	173 201 192	200 119 101	494 282 433
GMC	1956 1956 1957	24,834 21,205 22,030	9,109 9,351 9,347	42 128 2,428	6,868 6,588 6,694	12,833 8,752 9,316	9,326 6,805 7,309	5,042 3,038 4,165	1,617 1,065 906	69,431 55,950 62,273
INTERNATIONAL	1958 1958 1957	33,217 26,838 27,805	12,542 12,254 14,278	3,693 3,898 3,759	3,992 4,193 4,884	21,140 17,163 16,277	16,877 11,633 13,979	11,220 8,668 10,255	7,088 6,368 6,777	108,826 89,746 97,112
KENWORTH	1959 1958 1957	*****	*****	******	******	******	******	120	768 858 800	786 856 1,010
MACK	1959 1958 1957	*****	*****	******	*****	134	783 1,058 1,146	4,302 3,545 4,820	8,367 7,262 7,114	13,479 11,860 13,314
PETERBILT	1969 1958 1957	*****	*****	*****	******	*****	******	18 78 194	604 336 304	621 414 496
WHITE	1958 1958 1967	4,500 2,825 4,300	858 817 1,178	38 101 238	12 11 396	706 526 460	2	******	******	5,966 4,142 6,576
STUDEBAKER	1989 1958 1957	*****			66	438	1,480 926 1,247	9,653 8,630 9,463	4,348 2,588 3,367	18,488 12,142 14,579
WILLYS JEEP	1959 1958 1957	10,878 7,744 6,684	******	******	*****	44007.1	******	******	******	10,576 7,744 6,684
WILLYS TRUCK	1959 1958 1957	11,926 12,441 14,278	8,130 2,338 1,063	*****	******	*****	*****	******	******	20,050 14,770 15,361
MISC. DOMESTIC	1959 1958 1957	*****	*****	*****	******	34 33 13	63 107 182	162 172 334	768 478 356	1,047 796 885
FOREIGN	1959 1958 1957	36,853 28,546 15,300	******	******		******	******	*****	*****	36,053 28,546 15,356
TOTAL	1958 1958 1957	504,886 385,757 451,997	133,938 103,723 125,935	12,435 13,249 28,948	77,394 84,111 113,296	100,104 74,803 48,958	46,587 36,217 35,070	36,400 28,740 33,963	29,370 21,104 21,771	940,181 726,704 859,021
% OF TOTAL	1989 1958 1957	53.70 53.09 52.62	14,25 14,28 14,66	1.82 1.82 3.27	8.23 8.82 13.19	10.06 10.29 6.70	4,96 4,85 4,08	3.87 3.95 3.95	3.02 2.90 2.53	100.00 100.00 100.00

Based on data from R. L. Polk & Co.



NEW, NATURALLY ASPIRATED

POMER



250 H.P. CUMMINS DIESEL!

Cummins new NH-250 packs 14% more horsepower into a diesel the size of the popular NH-220—naturally! This gives you the power to move more freight faster and with greater saving. The more powerful NH-250 has 15% greater piston displacement (855 cu. in.) than the NH-220. Coupled with the exclusive Cummins PT injection system and open combustion chamber design, this provides fuel economy that can't be matched by any comparably rated diesel. New and improved internal features, pointed out on the next page, assure hundreds of thousands of trouble free miles. All in all, the new NH-250 is stronger, more durable, more profitable. And to get the inside story on this great new engine, turn page . . .

CUMMINS

INSIDE STORY OF THE PROFIT-MAKING

CUMMINS NH-250

1. New PT Fuel Injectors Redesigned to provide better efficiency with Cummins internal fuel lines. Means reduced labor for inspection and/or replacement; elimination of threaded fuel connectors.

2. Improved Cylinder Head Design 12 hold-down capscrews (vs. 6 on previous models) equalize pressure on gasket, reduce stress on valve seats and cylinder liners. Larger, dual intake and exhaust valves permit maximum combustion.

3. New Cylinder Liners NH-250 liners are 18% thicker than those used in other models. Gives greater protection against corrosion failures in liner and block.

4. Stronger Block New cylinder block has stronger ribs in critical sections. Water circulation system provides rapid heat dissipation.

5. Exclusive PT Fuel System Delivers fuel to injectors through drilled passages in cylinder heads, eliminating external fuel manifolds and connectors.

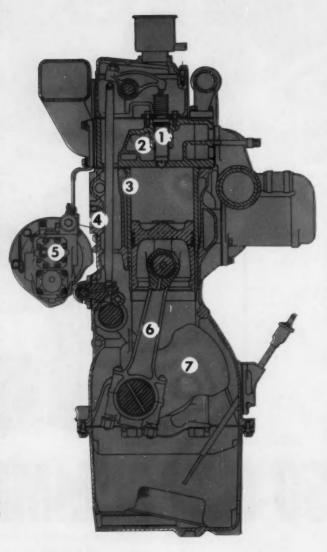
6. Tapered Connecting Rod Provides larger thrust area on piston pins—reduces load concentration—extends component life.

7. Stronger Crankshaft Identical to that used in 380 h.p. engines. Induction hardened journals give extra miles between regrinds.

Other Features New, simplified Cummins Air Compressor allows servicing without removal from engine. Only air compressor covered by a 100,000 mile warranty! Also, internal oil and fuel lines reduce maintenance, and damage to exposed lines, leaks around threaded connections!

Start earning more profit today! Specify the new NH-250 in these famous-make trucks: Autocar, Brockway, Diamond T, Freightliner, Hendrickson, International Harvester, Kenworth, Mack, Peterbilt, and White. See your truck representative or Cummins Distributor for details. Don't wait!





CUMMINS ENGINE COMPANY, INC., COLUMBUS, INDIANA

INTERNATIONAL SALES & SERVICE — CUMMINS DIESEL INTERNATIONAL LTD., NASSAU, BAHAMAS — CABLE: CUMMAS OVERSEAS FACTORY — CUMMINS ENGINE COMPANY LTD. — SHOTTS, LANARKSHIRE, SCOTLAND



VEHICLE TAXES

Who pays what share and how much?

				Average rate of payment				
User Groups	Regis- tration	Vehicle- miles traveled ¹	Highway- usor taxos paid ³	Per vehicle	Per vehicle- mile	Per ten- mile ³		
Passenger cars	83.83% .22	81.48%	65.82% 1.68	\$ 50 470	0.84¢ 1.85	0.276		
Total	15.95 15.07 .88 100.00	17.94 14.38 3.56 100.00	32.50 20.46 12.04 100.00	131 87 881 64	1.21 0.96 2.25 0.67	0.18 0.28 0.12 0.23		

Source: Bureau of Public Reads, based on latest available data (1855).

—Publiclyowned vehicles other than transit buses are emitted.

Excludes (1) fines and penaltice,
amounting to \$17,860,000 and (2) tax payments of \$16,897,000 assigned to light trailers
and \$5,000,000 assigned to motorcycles.

—Based on average operating GVW.

TRAILER DATA

TRAILER SHIPMENTS

'59 shows 20,000 more than '58

1	Shipments
on Units	Value
71,743	\$387,327,000
51,751	280,588,000
62,313	316,308,000
67,824	329,230,000
78,468	371,413,000
54,582	245,501,000
96,009	294,849,000
57,973	228,378,000
64,691	245,315,000
7 65,966	229,685,000
7467	7 71,743

Source: Industry Division, Bureau of the Consus.

1959 TRAILER REGISTRATIONS

California has the most

	Trailers Semi-Trailers							
State	Tourist ³	Commercial	Total					
Alabama	I commer-	Commen (18)	20,909					
Alaska	(2)	(1)	20,303					
Arizona	51,205	12,846	64,051					
Arkansas	01,200	******	49,778					
California		******	700,295					
Colorado	13.300	48,000	61,300					
Connecticut	30,541	9,451	39,992					
Delaware			11,473					
District of Columbia	*****	******	1,559					
Florida	222,199	36,309	258,508					
Georgia	44,569	16,399	60,968					
daho	36,520	490	37,010					
Illinois	*****	*****	145,000					
Indiana	N. F. S. etc.	*****	143,800					
lowa	*****	*****	128,876					
Kansas	4,500	12,000	35,997					
Kentucky	45,413	02,000	16,500					
Louisiana		23,277	68,690					
Maine		111111	39,674 36,119					
		*****	30,110					
Massachusetts	25,085	322,210	105,420					
Michigan	133,000	42,800	347,296 175,800					
Mississippi	8,617	10,619	19,236					
Missouri	0,011	10,010	118,022					
Montana	18,025	15,139	33,164					
Nobraska	62,022	12,193	74,219					
Nevada	******	144144	16,82					
New Hampshire	4		10,896					
New Jersey	*****	*****	89,49					
New Mexico	******		29,000					
New York	*****	******	159,000					
North Carolina	92,874	26,723	119,597					
North Dakota	1,600	1,000	3,200					
Ohio	13,200	234,800	248,000					
Oklahoma	12,162	15,876	28,03					
Oregon	23,006	14,267	37,27					
Pennsylvania	3,500	110,000	113,50					
Rhode Island	2,194	12,570	17,200 14,76					
South Dakota			38,86					
Tennessee	7,500	*****	7,50					
Texas	30,000	300,000	330,00					
Utah	30,000	000,000	9,50					
Vermont	*****	******	12,40					
Virginia	41,311	24,930	66,24					
Washington	104,410	18,811	123,22					
West Virginia	24,503	8,767	31,27					
Wisconsin	10,183	21,435	31,61					
Wyoming	*****	******	18,00					

1 -- Included with trucks.

Included with passenger cars.
 Includes house or camp trailer and light 2-wheel trailers pulled by ear or utility truck.

TRAILER SHIPMENTS BY TYPE

All but three show gain in '59 over '58

		1959		1958
Type of Trailer	Units	Value	Units	Value
Vans Insulated and refrigerated	4,633	\$ 38,455,000 4,045,000	3,611	\$ 27,500,000 2,918,000
Aluminum	4,090 1,213	34,410,000 42,632,000	3,135 518	24,582,000 3,396,000
Steel	1,213	42,632,000	124	814,000 2,582,000
Furniture	1,489 1,218 251	6,771,000 5,387,000 1,384,000	1,485 1,328 100	6,531,000 6,793,000 738,000
All other closed-top vans Steel Aluminum	29,623 7,901 21,722	162,045,000 36,856,000 125,189,000	18,311 6,180 12,122	181,976,000 28,864,000 73,112,000
Open-top vans. Steel Aluminum	3,147 1,282 1,865	16,384,000 6,039,000 10,345,000	2,373 1,016 1,357	19,846,000 4,690,000 15,156,000
Total—Vans	40,085	\$231,877,000	28,198	\$159,249,000
Non- and low pressure Petroleum	4,571	35,732,000	4.010	31,047,000
All otherHigh pressure	1,977	21,061,000 4,057,000	1,249 376	12,164,000 4,429,000
Total—Tanks	6,911	\$60,850,000	8,635	\$47,640,000
Single axie	349 993	478,000 3,995,000	318	424,000 2,163,000
Total	1,342	\$4,471,000	927	\$2,577,000
Racks, livestock, and stake Grain bodies, all types	541 1,703 9,714	2,623,600 5,857,000 36,002,000	1,442 1,073 6,383	6,556,000 3,718,000 21,804,000
Total Platforms	11,958	\$43,482,000	8,888	\$32,078,000
Low-bed heavy haulers. Dump Trailers. All other trailers.	2,458 2,268 3,102	10,689,000 21,248,000 16,319,000	2,301 2,548 2,630	9,779,000 11,401,000 9,502,000
Total—Complete Trailers	68,124 3,617	\$378,247,000 9,000,000	48,507 3,244	\$272,226,000 8,382,000
Total—Trailers and Chassis	71,743	\$387,327,000	51,751	\$280,588,000
Detachable trailer van bedies	3,165	\$9,541,000	1,944	\$7,206,000

Source: Industry Division, Bureau of the Census.

TRAILER SHIPMENTS BY MONTH

'59 average was 5,677 units per month

		1960	1958			
	Units	Value	Units	Value		
January	4,601	\$ 26,106,000	3,459	\$ 19,804,000		
February	4,939	27,719,000	3,078	17,403,000		
March	5,606	31,064,000	3,527	20,673,000		
April	6,144	33,148,000	3,610	20,527,000		
May	6,150	32,627,000	3,963	21,658,000		
June	6,487	34,521,000	3,847	21,029,000		
July	5,823	32,548,000	3,959	21,806,000		
August	5,008	32,589,000	4,288	23,338,000		
September	6,171	34,219,000	4,495	25,179,000		
October	5,304	30,513,000	6,006	28,461,000		
November	5,387	36,188,000	4,202	24,113,000		
December	5,844	33,008,000	4,973	28,145,000		
Total	68,124	\$378,247,000	48,507	\$272,226,000		

Seurca: Industry Division, Bureau of the Consus.

Sealed Power is a <u>real hard nose</u> about hard parts quality

Flange relief on the sleeve.

This undercut allows a finer finish in the flange area and truer, more uniform flange width.

Uniform wall thickness

Properly install a Sealed Power sleeve in a rebored block. "Mike it." Perfectly round every time because of the special Sealed Power finishing process which assures uniform wall thickness. No costly honing.

Fine cross-hatch finish on ID

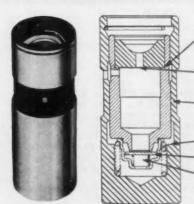
Scientifically developed to aid quick ring seating. Because of the uniform wall thickness, this finish is never destroyed by honing. More costly ground finish on the OD to assure virtually 100% contact with the cylinder wall.

Chamfer

A precision chamfer on the OD to assure easy installation into the block.



HYDRAULIC TAPPETS



- 1. Push rod seat made of thruhardened steel, positioned inside the plunger making a much stronger unit.
- 2. Push rod seat, whenever possible, has a bleed hole to allow quit operation quicker.
- 3. Plunger made from thruhardened steel, fully drawn to relieve stresses and eliminate subsequent warpage during operation.
- High pressure chamber is fully machined. Plunger bottoms on a flat, square surface which eliminates cocking.
- Flat check valve—very light with respect to the valve seat area, which causes quick check valve response at all engine speeds.
- 6. Large "valve open" area allows fast tappet recovery.

ADJUSTABLE TAPPETS

Proved in over 1,000,000 installations



This is Sealed Power's popular selling No. AT770, an improved design of the original Adjustable Tappet. It features a patented Self-Locking Tappet Screw. Adjustment is simple and each tappet holds the original setting. They give thousands of miles of smooth valve train action and maximum power.



SEALED POWER CORPORATION . MUSKEGON, MICHIGAN

Preferred Performance

PISTONS . PISTON PINS . SLEEVES AND SLEEVE ASSEMBLIES . VALVES AND VALVE PARTS . TAPPETS . WATER PUMPS





"Pete" Peterson of GENERAL EXPRESS-WAYS, Chicago, tested the Thoro-Trac on four tractors for a year, over every imaginable type of terrain and under all road conditions. The results were surprising. Not only did the Thoro-Trac improve traction and braking efficiency, it reduced tire wear to the point where Thoro-Trac units were actually paying for themselves in the life of one set of tires.

On the basis of this convincing proof of effectiveness, General Expressways equipped all eighty-five of their "six wheelers" with the tandem V-BELT DRIVES.

Mr. Earl D. Wood, Exec. V.P. of General Expressways says, "We are thoroughly satisfied with the performance of the Thoro-Trac and consider it a very wise investment."

Safe at home after a rugged Milwaukee-Chicago run through deep snow drifts, this International Harvester DCOT-405 was, of course, equipped with Thoro-Trac. "Every other rig on the road was stuck but mine," asserted the driver. "I'd never have made it if it hadn't been for Dayton Thoro-Trac V-Belt drives."

Thoro-Trac® V-belt drive for double traction lower operating cost

Only Dayton makes Thoro-Trac and only Thoro-Trac offers all of these outstanding advantages

- More usable pulling power. Dayton Thoro-Trac gives you EIGHT driving wheels instead of Four . . . indispensable in ice and snow, mud or gravel. Minimizes wheelspin.
- Double Tire mileage. By doubling the traction on your tandem axles you reduce tire wear and minimize sliding, scuffing and hopping
- Increased braking efficiency. Gripping surface between tires and road is nearly doubled, especially valuable on downgrades when engine is providing braking effort. Prolongs

brake life, equalizes braking effort. Insures faster, safer stops.

- Greater payload potential. With the Dayton Thoro-Trac you actually save up to 1,000 lbs. in dead weight over other types of tandem drives.
- Lower installation costs. Installation is simple—maintenance negligible. Merely remove the outer wheel, slip on the tandem sheave, roll the belt into the sheave groove through the special notch, bolt on the outside wheel. Result...eight wheels driving.

NOW...

INTERNATIONAL HARVESTER offers the DAYTON THORO-TRAC V-BELT DRIVE as an optional accessory.



OD.R. 1960



Automotive Department

Dayton Industrial Products Co.

2100 Janice Ave., Melrose Park, Illinois
A Division of The Dayton Rubber Company

Summer or winter Thoro-Trac can increase the tire mileage and traction of your tractors. Get the full value story—send in this coupon now.

BUS DATA

in thousands					Truck and	Bus Tires
of units except bus cales are in actual numbers	New Truck Registrations	Truck Factory Sales— Domestic	Truck Trailer Shipments	Bus Factory Sales— Domestic	Replace- ment Shipments	Original Equipments Shipments
1909	940.2	940.1	71.7	2206	10014.6	4417.2
1958	725.8	696.1	51.0	3016	9228.4	3375.0
1957	858.1	891.4	59.7	3310	8544.5	4040.7
1956	894.4	896,2	67.5	3617	8894.2	4547.9
1965	957.0	1052.7	76.3	3599	9056.8	4800.3

INTERCITY PASSENGER MILES TRAVELED

Private passenger cars show gain, rails and buses lose ground

(in billions) Total		Private Automobiles		Intercity Buses		Air Lines		Railreads		Waterways	
Year	Intercity Travel	Pagr. Miles	% of Total	Pagr. Miles	% of Total	Pagr. Miles	% of Total	Pagr. Miles	% of Total	Pagr. Miles	% of Total
1956 1967 1856	727.0 719.2 000.8 004.5	649.3 637.8 617.7 565.8 548.8	89.3 88.7 88.4 80.2	24.0 25.0 25.2 25.5 25.6	3.3 3.5 3.6 3.8	28.3 28.3 28.5 22.7	3.9 3.9 3.6 3.4	23.8 28.2 28.5 28.7	3.2 3.6 4.1 4.3	1.8 1.0 1.0 1.7	0.3 0.3 0.3

Source: Compiled by National Assn. of Motorbus Operators from records of Interstate Commerce Commission.

TRANSIT RIDERS

NEW TRANSIT EQUIPMENT Trend is still downward

High speed units hold well

(I - 0.000)		Railway							Railway				
Year 1955	Surface 1,488 1,207 878 679 572	Subway and Elevated 1,912 1,870 1,880 1,943 1,815	Total 3,401 3,077 2,758 2,522 2,387	Trolley Coaches 1,367 1,202 1,142 983 843	Motor Buses 7,824 7,250 7,043 8,874 6,502	Grand Total 12,392 11,529 10,941 10,389 9,732	Year 1964	Surface 0 0 0 0	Subway and Elevated 280 288 378 469 428	Total 280 288 378 489 428	Trolley Ceaches 0 43 0 0	Meter Buses 2,225 2,008 2,789 1,946 1,608	Grand Total 2,485 2,429 3,128 2,415 2,126
Saurear Amaria	an Transi	Ann					Revenue America	on Tonnal	Acen				

REVENUE BUS FACTORY SALES

							Decem	ber was b	est mont	h in '59
	1959	1958	1957	1956	1955	1954	1953	1952	1981	1980
January	169	327	269	253	190	405	254	778	661	219
February	143	308	238	278	176	328	190	625	621	133
March	245	342	341	434	325	348	236	509	820	199
April	283	344	506	371	519	379	145	597	819	268
May	282	241	462	382	313	323	367	423	742	412
June	267	91	389	503	309	351	380	484	838	588
July	233	358	309	307	298	245	376	224	665	397
August	82	265	315	428	434	308	447	349	783	457
Soptomber	134	216	243	388	223	320	348	387	743	423
October	268	149	233	298	469	372	619	389	1,174	553
November	180	167	241	233	359	305	371	319	833	584
December	287	208	287	228	410	427	424	231	845	665
Total	0 842	9.040	0.000	4.004	A 000	4 440	4 400			4 000

As reported by the Automobile Manufacturers Ason. From plants located in the United States.

BUS AND BUS CHASSIS FACTORY SALES

School bus chassis sales make strong come-back

			School	Total Ceach				
	City Type	Intercity Type	Special*	Total Ceaches	Wholesale Value	Avg. Value per Coach	Bus Chassis	and School Bus Chassis
1959	1,819 1,975 2,290 2,832 2,615	546 888 1,189 834 1,037	178 163 354 396 371	2,543 3,016 3,833 4,064 4,023	\$82,000,000 60,295,000 73,993,000 75,836,000 74,207,000	\$20,448 10,902 10,304 18,060 18,446	24,888 19,719 23,741 22,714 29,536	27,383 22,735 27,574 26,778 30,558

Source: Automobile Manufacturers Assn. * Includes Integral school buses.

Unique to Reo are the close tolerances held in the building of Gold Comet Engines—both V-8's and 6's. Engine sleeves, pistons, connecting rods and piston pins are atmospherically conditioned and fitted in an even 70° temperature. They are then assembled in an airconditioned, dustproof

chamber where a 70° temperature is maintained the year 'round. Piston pins to piston, for example, are selected to within $\frac{1}{2}$ of one-tenth of one-thousandth of an inch. Then actually palm pushed into place while all parts are at the exact same temperature.

No truck engine in America is built with more rigid controls over quality. REO DIVISION, The White Motor Company, Lansing, Michigan.



gold standard of Values



BEFORE

you convert your fleet's emergency signals to conform to the new I.C.C. Regulation 192.22 which requires the flashing of two front and two rear turn signals simultaneously as a vehicular traffic hazard warning . . .

BE SURE

you specify a signaling system that incorporates dependable

TUNG-SOL FLASHERS



534-12 volt, flashes one to six 21 cp or 32 cp lamps, with positive pilot action.



535—6 volt, flashes one to six 21 cp, with positive pilot action.



536—12 volt, flashes one to six 21 cp or 32 cp lamps, without positive pilot action.

Automotive Products Division
Tung-Sol Electric Inc., Newark 4, N. J.



CHECK YOUR REGS

OPERATION

State Size & Weight Limits								. 274
Government Fleet Facts .					•			. 278
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Mud Guard Requirements								. 290
Vehicle Inspection Laws .								. 294
State Tax Guide								. 298

SECTION 3

STATE SIZE & WEIGHT LIMITS

BTATE	Width (Inches)	Peek)	L	ENGTI	4			(LEC								Tiese He	less Other	wise Sner	ified	
TVY	Width (Inches)	feet)				LENGTH			(LEGAL LIMITS)			Belo	w Limits	Appry to 1	UBUMBUC	THES ON		wise open		
TVY		Height (Feet)	Single Unit	Tractor Semi-Trailor	Other Combinations	Number of Trailers (Semi-Trailer—)5)	Minimum Tandem Axle Spacing	Peunds Per Inch of Tire Width	Per Axie (1000 lb.)	Tandem Axles 4 feet apart (1000 lb.)	4-Wheel Single Unit	6-Wheel Single Unit	4-Wh. Tracter 2-Wh. Semi-Tr.	4-Wh. Tractur 4-Wh. Semi-Tr.	6-Wh. Tracter 4-Wh. Semi-Tr.	4-Wh. Trusk 4-Wh. Trailer	4-Wh. Truck 6-Wh. Trailer	6-Wh. Truck 4-Wh. Trailer	6-Wh. Truck 6-Wh. Trailer	Tractor, Semi-T. & Full Trailer Combs.
Ala.	96	m 1234	35k	50	NP	34	40	NS	18	36	36	54	54	64.6	64.6	NP	NP	NP	NP	NP
Alas.	96	13	38k	60	60	2	40	500	18	32	29	43	47	61	75	65	76.8	76.8	76.8	76.8
Artz. Y	96	131/2	40	65	85	134	40	NS	18	32	36	50	54	68	76.8	72	78.8	78.8	78.8	76.8
Ark. V	96	131/2	35k	50	50	NR	46	NS	18	32	18b	32b	36b	50b	56b	54b	56b	56b	56b	58b
Cal. Y	d 96	1314	35ak	60	65	NR	NS	NS-P 600-S	18	32	36	50	54	68	76.8	72	76.8	76.8	76.8	78.8
Colo. X	96	13½w 12½	35ak	60	60	2	40	NR	18-I 16-J	36	30	46	*54	*72	*73.6	72	*73.6	+73.8	*73.6	*73.6
Genn. T	102	123/2	50	50	NP	3/2	NS	NS-P 800-S	22.4	36	32	50	50	80	60	NP	NP	NP	NP	NP
Del. Y	96	m 1234	40	50	60	13/2	48	700	20	36	30c	46c	48c	80e	60c	82c	52c	60c	60c	60c
D. C.	96	1254	35	50	50	1 or 3/2	40	NS	22	38	44	80	85.4	65.4	65.4	65.4	65.4	65.4	65.4	NP
Fla. Y	96	m 1256	40a	50	50	1 or 36	40	NS	20	40	40	60	80	86.4	66.4	66.4	66.4	66.4	66.4	NP
Ga.	98	1334	39.5 km	50	50	1 or 34	40	NR	20.3in 18-Jn	40.6n	40.6n	61n	63.2n	63.2n	63.2n	63.2n	63,2n	63.2n	63.2n	NP
Idaho Y	o 96	14	35/	60	65	134	NS	800	18	32	36	80	54	68	76.8	72	76.8	78.8	76.8	78.8
z III.	96	131/2	42	50	50	134	40	800	18	32	36	41	45	59	72	63	72	72	72	72
Ind.	96	131/4	36k	50	50	11/2	40	800	18	32	36	50	54	68	72	72	72	72	72	72
TY	98	131/2	35ak	50	NP	3/4	40	NR	18	32	36	50	54	72.6	72.6	NP	NP	NP	NP	NP
Kan. Y	96	131/4	35ak	50	50	1 or 36	40	NR	18-i 16-J	32	38	50	54	63.8	63.8	63.8	63.8	63.8	63.8	NP
Ky. TZ	96	1316	35	50	NP	34	42	600	18	32	38	50	54	59.6	59.6	NP	NP	NP	NP	NP
La.	96	m 1256	35ak	50	60	1 or 3/2	40	450	18-I 16-J	32	186	326	38b	50b	64b	54b	54b	68b	68b	NP
Me. Y	96	1234	50	50	50	1 or 3/2		600	22-G	32	32	50	50	80	60	60	60	60	60	NP
Md. X	96	m 121/2	55	55	55	NR	NS	NS	22.4	40	44.8	62.4	65	65	65	05	65	65	65	65
TY Mass.	96	NR	35k	50	NS	1 or 1/2	NS	800	22.4	36	44.8	60	68	60	60	47.8	47.8	63	63	NP
Mich.	96	131/2	35kv	55	55	134	42	700	18-P 16-S	26p	36-W	44-W	54-W	68-W	78-W	72-W	88-W	86-W	94-W	104-W
Minn. Y	96	131/2	-	50	50	1 or 1/2		NR	18-P 10.8-S	32	36	50	54	68	72.5a	72	72.5a	72.5a	72.5a	NP
Miss.	96	m 123-5			50	1 or 3/2		Table	18-I 16-J	28.6p	27	41	48	50	50	50	59	59	99	NP
Ma. Y		8 1256	35ak		50	NR	40	800	18-I 16-J	32	36	50	54	64.6	64.6	64.6	64.6	64.6	64.6	64.6
Mont. Y	96	131/2		60	80	1 or 34		NS	18	32	38	80	54	68	76.8	72	76.8	78.8	76.8	NP
Nebr. Y	96	1334	40	60	60	13/2	40	NR	18	32	36	50	54	71.1	71.1	71.1	71.1	71.1	71.1	NP
Nev. Y		NR	NR	NR	NR	NR	42	600	18	32	36	50	54	68	78.8	72	76.8	78.8	78.8	78.8
N. H. Y	96	131/2		50	50	NR	NS	800	22.4	361	33.4	40)	52.8	66.4	88.4	66.4	66.4	68.4	86 4	86.4
N. J.	96	131/2		50	50	1 or 3/2		800	22.4h	32	30	40	52.4					60	60	NP
N. M.	96 96	1334		65	65	134		600	21.6	34.3	43.2	55.9	64.8	77.5	86.4	88.4	86.4	86.4	86.4	86.4

SIZE RESTRICTIONS					GROSS WEIGHT			(See I	(See NOTE) PRACTICAL GROSS WEIGHT LIMITS							(In thousands of pounds)				
STATE		Height (Feet)	LENGTH					(LE	GAL LIM	ITS)	Below Limits Apply to Proumatic Tires Unless Otherwise Specified									
	Width (Inches)		Single Unit	Tractor Semi-Trailer	Other Cembinations	Number of Trailers (Semi-Trailer-3g) Minimum Tandem	Minimum Tandem Axle Spacing	Peunde Per Inch of Tire Width	Per Axie (1800 lh.)	Tandem Axles 4 feet apart (1000 lb.)	4-Wheel Single Unit	6-Wheel Single Unit	4-Wh. Tracter 2-Wh. Semi-Tr.	4-Wh. Tracter 4-Wh. Seeni-Tr.	6-Wh. Tracter 4-Wh. Semi-Tr.	4-Wh. Truck 4-Wh. Trailer	4-Wh. Truck 6-Wh. Truiler	6-Wh. Truck 4-Wh. Trailor	6-Wh. Trusk 6-Wh. Trailer	Tractor, Semi-T. & Full Trailer Combs.
N. Y. X	96	13	35ak	50	50	1 or 34	46	900-P 640-S	22.4	36	44.8	58,4	65	65	85	65	85	95	65	NP
N. G.	96	m 12½	35ak	50	50	1 or 1/2	48	600	19-in 17-Jn	38n	L 31.5n	L 46.2n	48.2n	62	62	62	62	62	62	NP
N. D. X	96	131/2	40a	00	60	134	40	560	18	32	36	48	54	64	64	64	84	64	64	NP
Ohia X	96	131/2	35ak	50	80	NR	NS	650	19	24p	38	80.5	57	69.5	*75.8	76	78	78	78	78
Okla. Y	96	1314	35k	50	50	1 or 1/2	40	650	18	32	38	80	64	68	73.2	72	73.2	73.2	73.2	NP
Ors. VY	96	121/2	35	50g	50y	1 or 1/2	40	550	18	32	26	50	84	60	66	60	60	60	60	NP
Pa.	96	m 12½	35kr	50	50	1 or 34	36	800	22.4	36	H 33	H 47	H 50	H 60	H 80	H 62	H 62	85 H	H 62	NP
R. L.	102	1234	40	50	50	1 or 34	40	800	22.4	NS	36	44	58	50	50	72	80	80	88	NP
S. C. Y	96	m 12½	40a	50	90	1 or 1/2	40	NR	20-I 16-J	32	40	82	60	68.3	68.3	68.3	68.3	68.3	68.3	NP
8. D. Y	96	13	35k	50	60	1341	40	600	18-i 16-J	32	36	50	54	08	73.2	72	73.2	73.2	73.2	73.2t
Tenn.	96	m 1234	35k	50	50	1 or 3-2	40	NS	18	32	36	50	54	61.5	61.5	39.5	39.5	53.5	53.5	NP
Tex. Y	96	1334	38k	50	50	1 or 19	40	650-I 600-J	18-I 16-J	32	36	50	54	72	72	72	72	72	:72	NP
Utah Y	96	14	45	60	60	2	40	NS	10-P 13.5-S	33	36	61	54	69	79.9	72	79.9	79.0	79.9	79.9
vı	96	1234	50	50	50	1 or 34	40	600	NR	NR	30	40	50	60	80	50	60	50	80	NP
Va. VY	96	m 123/2	35k	50	50	1 or 35	40	650	18	32	36	50	54	56.8	56.8	56.8	56.8	56.8	96.8	NP
Wash.	96	131/2	35k	60	60	11/2	42	550	18	32	28	36	48	60	68	64	81	72	72	72
W. Va.	96	m 123/2	35ak	50	50	1 or 34	40	NR	18	32	38	50	54	60.8	8.60	80.8	80.8	80.8	80.8	NP
Wis. VY	96d	131/6	35k	50	50	1 or 3g	42	800	18-C	32	38C	48C	54C	73C	73C	73C	73C	73C	73C	NP
Wye. Y	96	131/2	40	60	60	2	40	NS	18	32	38	50	54	68	73.9	72	73.9	73.9	73.9	73.9

NOTE ON "W" AND ASTERISK

Except when shown by asterisk or when followed by the letter "W," the above gross weight limits are the limits fixed by state law. When shown by asterisk the above limits are computations made by the National Highway Users Conference to show what it considers to be practical gross weights where gross weights are arrived at by application of one of the formulae shown below under Footnete "X." In making these computations, wheel base is arrived at by deducting 8 fit total over-hard from a rear from permissible distance apart. When actual over-hang is less than 8 ft. additional gross eight will be possible. When followed by the letter "W," the limits shown are maximum possible weights where gross weight is determined by permissible axise weight. These limits are possible only when each axise carries a gross weight equal to the permissible axise limit as shown.

- f-10-ft. 2-axle relicle permitted on designated highways. a-Including tolerance.
- *—See Note above.

 See Note above.

 Table—There is a table of axie semi-trailers permitted subject to certain restrictions.

 Table—Mich—22 3000 lbs on one set of
- e-With power brakes.

 6-104 in. for urban buses.

 k-Buses permitted 40 ft (42 ft e-50 ft for auto transports. in Del., 45 ft in Okla., 45.2 ft in Gg.)

 r-30-in. tolerance permitted as

- b—Vehicles over 35-ft length must have 3 axies.

 b—Plus weight on front axie.

 e—With power brakes.

 k—Itses permitted 40 ft.

 k—Itses permitted 40 D-On "Class B" highways.

 - s-Permits for 181/2 ft may be obtained.

- t-Special annual permit for 3- MP-Not permitted, unit combinations.
- w-10 ft for auto transports and moving vans.
- w-On designated highways.
- A-4 consecutive axles of 5-axle combination may not exceed 60,000 lbs.
- C-On "Class A" highways.
- G-Axles less than 10 ft spart W-See Note above. Ifmited to 16,000 hts per axle.
- 1-Permissible on balloon tires.
- e-102-in. buses permitted subject to certain restrictions.

 —Auto transporters allowed 13½ transporter semi-trailers.

 —(40.ft 2-axie rehicle permitted the contraint of the con L-2-axle buses permitted 23.625
 The the maximum net weight;
 3-axle bus, 31.596 lbs.

 Formulas" on page 278.

 Z-See "Restriction Peculiar to Certain States" on page 278.

- Buses permitted 48 ft on designated highways.
 NR—No restriction.
 - NS-Not specified.
 - P-Pneumaric tires.
- —On designated highways.

 —Three-unit combinations with lengths up to 65 it permitted con State Routes 86 and 242.

 —4 consecutive axies of 5-axie combination may not exceed 66,000 lbs.

 A" highways.
 - V-Solid tires prohibited.
- H—Maximum shown. In practice, permissible gross weight depends on class.

 X—States where gross weight is determined by formula. See "Bridge Formulas" on page 278.
 - Y—States where gross weight is determined by table of axie spacing. See "Axle Spacing Formulas" on page 278.

DELCO-REN

(a part of the big Delco-Remy line)







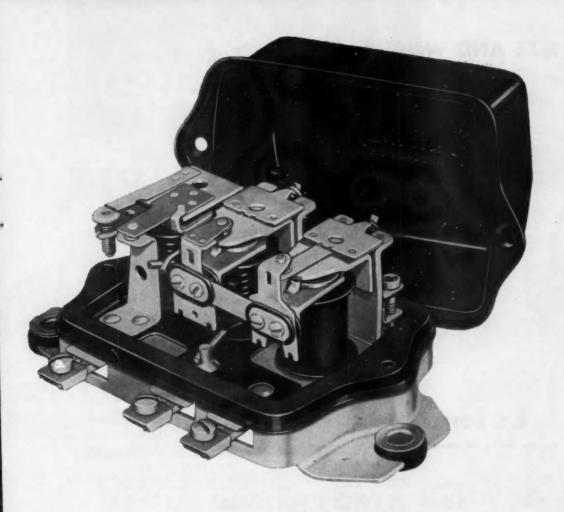
Simplify your stock-satisfy your customer! Now, with the big Delco-Remy line alone, you're set to service all popular American cars. And you offer the quality and reliability of parts made by the world's largest original equipment manufacturer of automotive electrical systems.

Ideal for replacement are Delco-Remy waterproof voltage regulators. What keeps them waterproof? New overhanging one-piece steel covers

- Molded nylon insulators
- Soft rubber gaskets.

What makes them top performers?

Newly designed armature contact springs



POPULAR AMERICAN CARS

- Tungsten and precious metal contact points
- Welded electrical connections.

Adjustment of all three units is easy and highly accurate with special fine-thread screw-type controls.

Regulators and other Delco-Remy electrical parts are available from your car or truck dealer or through the United Motors System.

FROM THE HIGHWAY TO THE STARS





DIVISION OF GENERAL MOTORS . ANDERSON, INDIANA

STATE SIZE AND WEIGHT LIMITS *

Continued from Page 275

AXLE SPACING

- Ala.—Gross weights graduated from 32,000 lbs if axle spacing is 4 ft to 64,650 lbs if spacing is 45 ft or more.
- Ariz. & Cal. Gross weights graduated from 32,000 lbs if axle spacing is 4 ft to 76,800 lbs if spacing is 56 ft or more.
- Del.—Gross weights graduated from 36,000 lbs if axle spacing is 4 ft to 60,000 lbs if spacing is 27 ft or more.
- C.—Gross weights graduated from 38,000 lbs if axle spacing is 4 ft to 65,400 lbs if spacing is 46 ft or more.
- Fla.—Gross weights graduated from 32,000 lbs if axle sparing is 4 ft to 66,450 lbs if spac-ing is 45 ft.
- idahe—Gross weights graduated from 30,506 lbs if sake spacing is 3 ft to 76,800 lbs if spacing is 56 ft or more; separate table of axle apacing ranging from 37,800 to 19,000 lbs for haulers of the process of the control of the farm processes of the control auce of wheel and axle loads.
- towa Gross weights graduated from 32.000 lbs if axle spacing is 4 ft to 72.634 lbs if spacing is 47 ft or more.

- tine—Gross weights graduated from 32,000 lbs if axle spacing is 4 ft to 50,000 lbs if spacing is 27 ft or more for 3-axle vehicles and to 60,000 lbs if axle spacing is 31 ft or more for 4-axle vehicles.
- Minn.—Gross weights graduated from 32,000 lbs if axle spacing is 4 ft to 72,500 lbs if spacing is 43 ft or more.
- Mics.—Gross weights graduated from 28,650 lbs if axle spacing is 4 ft to 55,650 lbs if spacing is 34 ft or more; on designated highways from 32,000 lbs if spacing is 4 ft to 59,000 lbs if spacing is 48 ft or more.

- br.—Gross weights graduated from 32,000 bb if axle spacing is 4 ft to 71,146 lbs for com-binations with four or more axles.
- Nev.—Gross weights graduated from 32,000 ibs if axle spacing is 4 ft to 76,800 lbs if spacing is 56 ft or more.
- is.—Gress weights graduated from 32,900 bis if axle specing is 4 ft to 60,000 bis if spacing is 35 ft or more, spacing is 36 ft or more.

 N. H.—Gress weights graduated is 36 ft or more, spacing is 36 ft or more.
 - M.—Gross weights graduated from 34,320 lbs if axle spacing is 4 ft to 86,400 lbs if spacing is 56 ft or more. N.
 - Okla.—Gross weights graduated from 32,000 lbs if axle spacing is 4 ft to 73,280 lbs if spac-ing is 43 ft or more.
 - Ore.—Gross weights graduated from 32,200 lbs if axle spacing is 6 ft to 76,000 lbs if spacing is 55 ft or more, provided that no vehicle or combination shall exceed 60,000 lbs except under permit.

- C.—Gross weights graduated from 32,000 lbs if axle spacing is 4 ft to 83,350 lbs if axle spacing is 50 ft or more.

 Md —858 (L. phys. 40)
- D.—Gross weights graduated from 32,000 lbs if axle spacing is 4 ft to 73,280 lbs if axle spacing is 45 ft or more.
- Tenn.—Gross weights graduated from 32,000 lbs if axle spacing is 4 ft to 61,580 lbs if axle spacing is 41 ft or more.
- Yexas—Gross weights graduated from 32,090 lbs if axle spacing is 4 ft to 58,420 lbs if spacing is 41 ft.
- Utah—Gross weights graduated from 33,000 lbs if axle spacing is 4 ft to 79,990 lbs if spacing is 54 ft or more.
- Va.—Gross weights graduated from 32,000 lbs if axle spacing is 4 ft to 56,800 lbs, if axle spac-ing is 35 ft or more.
- Wash.—Gross weights graduated from 32,000 lbs if axle spacing is 4 ft to 72,000 lbs if axle spacing is 57 ft or more.
- W. Va.—Gross weights graduated from 32,000 lbs if axle spacing is 4 ft to 72.280 lbs if spacing is 57 ft.
- Wise.—Gross weights graduated from 32,000 lbs. If axle spac-ing is 4 ft to 73,000 lbs on Class A highways (including all tolerances) of 4 ft to 68,000 lbs for 45 ft or more on Class A highways (including all tolerances),
- Wys.—Gross weights graduated from 32,000 lbs if axle spacing 1s 4 ft to 73,330 lbs if spacing 1s 45 ft or more.

 Ws. C.—Gross weight limit on most secondary highways is 16,000 lbs for two axles and 24,000 lbs for three axles.

BRIDGE FORMULAE

- Md.-850 (L plus 40) any unit or combination, provided that gross weight of any vehicle or combination shall not exceed 65,000 lbs.
- Y.—850 (L plus 46) any unit or combination having three or more axles, provided that gross weight shall not exceed 65,000 lbs.
- N. D.-750 (L plus 40) any unit
- Ohio-900 (L plus 42 2/9).

RESTRICTIONS PECULIAR TO CERTAIN STATES

- Limits shown are permissible on designated highways; otherwise limited to 16,000 lbs on any one axle.
- Ky.—Limits shown are permissible on designated highways; otherwise limits are: height—11½ ft; length—text 26½ ft; length—semi-trailer combination 30 ft; gross weight 18,000 lbs.
- Miss.—Gross weight limits shown are permissible on designated highways; on other highways; or other highways; or other highways, graduated from 28,650 lbs if axle spacing is 4 ft to 55,650 lbs if spacing is 38 ft.

U. S. GOVERNMENT FLEET OPERATING FACTS

As reported by the General Services Administration for the year ending June 30, 1959

TRUCK-GROSS VEHICLE WEIGHT

	Automobites	Station Wagons	Ambulances	Suses				Ficet Average
Civilian Agencies	21,285 16,256	2,447 4,576	291 1,552	973 6,040	74,104 41,945	8,798 18,815	4,747 9,094	*****
All Vehicles	38,081	7,023	1,843	7,013	116,049	27,613	13,835	
Civilian Agencies	15.3 13.9	14.8 12.9	10.2 9.0	5.6 5.7	9.7 10.6	5.9 6.6	4.5 4.1	9.6
All Vehicles	14.7	13.4	9.1	5.7	10.0	6.3	4.3	9.6
Civilian Agencies	13,008 12,387	12,325 14,757	4,720 5,639	12,284 8,697	9,288 9,585	6,168 5,124	9,631 4,384	9,823 8,782
All Vehicles	12,733	13,881	5,492	9,184	9,399	5,489	6,128	9,329
Civilian Agencies	\$.06323 .06965	\$.06851 .08829	\$.22496 .22841	\$.21928 .33970	\$.10373 .09901	\$.18986 .20002	\$.26055 .37739	\$.10500 .13139
All Vehicles	\$.06606	\$.06196	\$.22794	\$.31815	\$.10228	\$.19633	\$.31586	\$.11600
Civilian Agencies. Dept. of Defense	\$.02550 .02169	\$.02503 .02652	\$.04726 .04167	\$.06043 .05005	\$.03170 .03048	\$.04645 .05158	\$.06196 .07347	\$.03235 .03385
All Vehicles	\$.02386	\$.02604	\$.04244	\$.05193	\$.03124	\$.04972	\$.06741	\$.03302
Civilian Agencies	\$.01070 .01640	\$.01312 .02016	\$.05245 .06771	\$.04740 .07637	\$.03171 .02300	3.05800 .05168	\$.09288 .09280	\$.03013 .03143
All Vehicles	\$.01315	3.01791	\$.06561	\$.07111	\$.02841	\$.05400	3.09274	\$.83071
Civilian Agencies	\$.01547 .01341	\$.01967 .01819	\$.07051 .05879	3.08300 .14450	\$.01939 .01533	\$.04081 .03957	\$.04380 .12391	\$.02130 .03108
All Vehicles	\$.01458	\$.01867	5.06040	\$.13333	\$.01785	\$.03858	\$.08160	\$.02567
Civilian Agencies	\$.00565 .01086	\$.00858 .02275	\$.05196 .06010	\$.02226 .05465	\$.01996 .03095	\$.04291 .05719	\$.06017 .08741	\$.01898 .03415
All Vehicles	\$.01051	\$.01822	\$.05898	\$.04885	5.02413	\$.05200	\$.07306	\$.02580
Civilian Agencies	3.00444	\$.00143	\$.00247	\$.00092	\$.00086	\$.00143	3.00146	\$.00188
All Vehicles	*****	*****	*****	*****	******	*****	*****	
Civilian Agencies	\$.00045	\$,00063	\$.00275	\$.00062	3.00071	\$.00075	8.00123	\$.00067
All Vehicles	111111	*****	*****	177455	** ***	*****	*****	*****
Civilian Agencies: Sold, Donated, Salvaged or		445		4-5				
Transferred to Other Agencies	588	443	16	102	9,683 1,208	2,101 175	636 274	*****
	Dept. of Detense. All Vehicles. Civilian Agencies. Dept. of Defense. All Vehicles. Civilian Agencies.	Civilian Agencies 21, 265 Dept. of Detense 16, 256 All Vehicles 38, 001 Civilian Agencies 15. 1 Dept. of Defense 13. 9 All Vehicles 14. 7 Civilian Agencies 13. 008 Dept. of Defense 12, 387 All Vehicles 12, 387 All Vehicles 12, 387 All Vehicles 12, 387 All Vehicles 5, 06302 Dept. of Defense 0, 08965 All Vehicles 5, 06302 Dept. of Defense 0, 02169 All Vehicles 5, 06302 Civilian Agencies 5, 02350 Dept. of Defense 0, 02169 All Vehicles 5, 02356 Civilian Agencies 5, 02356 Civilian Agencies 5, 03167 Dept. of Defense 0, 01640 All Vehicles 5, 01647 Dept. of Defense 1, 01647 Dept. of Defense 1, 01640 All Vehicles 5, 01647 Dept. of Defense 1, 01640 All Vehicles 5, 01656 Civilian Agencies 5, 00665 Dept. of Defense 1, 01640 All Vehicles 5, 01656 Civilian Agencies 5, 00665 Dept. of Defense 1, 01660 All Vehicles 5, 01661 Dept. of Defense 5, 00665 Dept. of Defense 5, 00665 Dept. of Defense 5, 00665 Dept. of Defense 5, 00645 Dept. of Defense 5, 00645 Dept. of Defense 6, 3, 00645 Dept. of Defense 7, 2016 All Vehicles 7, 2016 All Vehicles 7, 2016 Civilian Agencies 7, 2016 All Vehicles 7,	Automobiles Wagens	Automobites Wagens Ambulances	Automobiles Wagens Ambulances Busea	Automobiles Wagens Ambulances Buses (1 Ton & Under)	Automobiles Wagens Ambulances Buses (1 Ten & Under) (1½-2½ Tens)	Civilian Agencies 21,265 2,447 251 973 74,104 8,788 4,787 1,952 6,040 74,104 10,815 0,004

HERE'S WHY RAMCO MEANS GROVE

join the legion of modern fleet men who put

RAMCO MODERN POWER SUCCESS

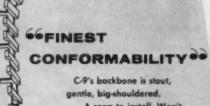
in every ring job — for less down time, less fuel costs — more ton-mile profit!



contact with top and bottom of ring groove. This contact stops oil croop on all piston

strokes, regardless of





gentle, big-shouldered.

A snap to install. Won't overlap in the groove.

Provides easy, no-push pressure against rails without shims. Conforms — fits like a glove.

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Model SS-Superior sightseeing Express

With a background of more than 35 years of quality bus manufacture; pioneer of many significant advances in design, construction and maintenance features, Superior brings to the transit field clean, crisp functional styling designed to appeal to passengers, and the strongest, safest body made today. Superior is built to meet the needs of any operator - from the one or two unit companies to the large fleets - with more equipment options at less cost. Superior's rugged construction means longer, low-cost, more-profitable operating life, with maintenance reduced to the minimum. Here's one good example: Super-ZINC Kote Steel, a Superior exclusive, protects from costly rust and corrosion damage more than three times longer than any other process used in the industry today. If quality transportation and low initial and operating costs interest you . . .

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COLOR AND REQUIREMENT SYMBOLS

A-Amber

G-Green

R-Red

Ye-Yellow

W-White

NP-Not Permitted

NR-Not Required

NS-Not Specified

NSM-Not Specifically Mentioned

N-No

Y-Yes

/—when used between two letters or numbers means "or," Example—2/4 means "2 or 4."

► ► Explanatory notes apply to chart

GENERAL FOOTNOTES

- *—I.C.C. neither approves nor disapproves any individual required item. Its Mator Carrier Safety Regulations, however, set forth certain constructional details of performance standards to which certain items must conform. Reference should be made to the Motor Carrier Safety Rules for complete details.
- -Prohibits red light visible from in front of vehicle.
- b-Prohibits red or green light visible from in front of vehicle.
- c—Tail lamp or separate lamp shall illuminate rear license plate with white light.
- d—Must be located and constructed so as to illuminate rear license plate with white light.
- -May be incorporated in tail lamp.
- f-Semaphores required an school buses.
- g-One or both may be incorporated in tail lamp or lamps.
- h-Number plate must be illuminated with white light.
- i—Reciprocity on commercial vehicle lighting equipment exists between New York and a majority of the states.
- i-Also two yellow or amber reflectors on front of vehicle.
- k-One may be part of tail lamp.

The ICC Motor Carrier Safety Regulations apply to "Automotive Safety Equipment" on vehicles operated by common and contract carriers ("for hire" carriers) of persons or property and by private carriers of property, when operated regularly in interstate or foreign commerce except when operated wholly within a municipality, between contiguous municipalities, or within a zone adjacent to and commercially a part of any such municipality or municipalities. When vehicles of common, contract or private carriers are transporting explosives or other dangerous articles the last-mentioned exception does not apply. Chart on pages 286 and 287 gives details on PRESENT ICC safety equipment requirements. Chart at right COMPARES present lighting requirements with changes scheduled to go into effect Aug. 1, 1960. (For details on these changes, see Mar., page 105, and this issue, page 33.)

SAFETY EQUIPMENT

Required or permitted on trucks, truck-tractors, trailers and buses as specified in ICC safety rules and regulations, state motor vehicle laws and official rulings . . . Compiled by National Highway Users Conference as of March 25, 1960

on pages 286 and 287 showing ICC and state-by-state lighting requirements▶▶▶

- m-Reflectors may be substituted.
- n—Reflectors may be used when vehicle has acetylene lamps.
- e—Two required on new vehicles first registered after Jan. 1, 1958.
- p—White, green or amber. Where green originally used, may be continued till replacements are necessary.
- q—Signal lamps are specified. In Wisconsin, new vehicles after Jan. 1, 1958.
- r-Yellow or orange flags required.
- s—On vehicles over 45 feet long, rear clearance and marker lamps shall be in combination.
- t—One green marker lamp every 10 feet on combinations over 33 feet long.
- u-New vehicles shall have double wipers.
- v—2 on new vehicles other than truck tractors. No exception for truck tractors in Pennsylvania.
- w-New vehicles.
- x-Or rear clearance lights required by I.C.C.
- y—Trailer and semi-trailer shall have one lamp on front visible from both sides.
- z-Clearance and marker lamps may be in combination.
- aa—Every vehicle 72 in., or more wide must have 2 amber or clear

- front, and 2 amber, clear or red rear reflectors. Clearance lamps may be substituted. Reflectors must be approved. Clearance lamps need not be approved.
- bb-Plus two auxiliary passing lamps.
- cc-On explosive carriers.
- dd—On interstate buses—green lights adjacent to destination sign or near upper corners; On introstate buses—purple lights in same locations.
- ee-Double wipers required on all school buses.
- ff-Two yellow stop lamps required on all buses.
- gg-If originally equipped with two, both must be operative.
- hh—Two reflectors also required on front—reflectorized material extending broadth of vehicle may be substituted.
- ii—Clearance and marker lamps may be in combination. When in combination there must be one such lamp on each side, midway of vehicle.
- kk-Permits tinted other than red.
- nn—Requires "a device or other means of preventing or removing ice or frost" from windshield.
- zx—Fog lamps are included within the term "Auxiliary Driving Lamps" and are treated accordingly.
- zz-Plus I auxiliary passing lamp.

	H	EAD MPS	LAI	VIL VIPS	1	STOP AMPS	REFL	EAR ECTORS	CLEA	RANG	CE		EMARI LAMPS		IDEN.	TIFICAT	ION		DIREC	TION		RE	SIDE	TORS
										Ce	der		Co	lar	Sets	Co	ior			Color			Ce	olor
Effective	Number	Color	Number	Color	Number	Color	Number	Celar	Number	Frent	Rear	Number	Front	Rear	Number (8	Front	Rear	Number	Front	Rear	"4-way"	Number	Front	Rear
At present	2	NS	2	R	2/1	R/Ye	2	R	2/4z	A	R	4z	A	R	NR			NR				2/4	A	R
Aug. 1, 1960	2	NS	2	R	2/1	R/A/Ye	2	R	2/4x	A	R	42	A	R	3	A	А	4	W/A	R/A/Ye	٧	2/4	A .	R

MEETS NEW I.C.C. REGULATIONS!







Double Face

Single Face

Flush Mount

Lamps available in Yankee blue-white chrome or black, baked-enamel finish.

NEW-Dynamic, Virgin Lucite Molded Lens. Widest angle projection on the market. More than three times candlepower required.

NEW-Extra Safety Protection with 1" reflector on Single Face and Flush-Mount lamps.

NEW - Unique Brass Socket permits uses of Single or Double Contact, indexed or nonindexed bulbs.

NEW - Heavy - Duty Flasher. Flashes 2-6 lamps simultaneously without change in rate of flash.

NEW - Construction: Heavy Wall, Non-Corresive, Die-Cast.



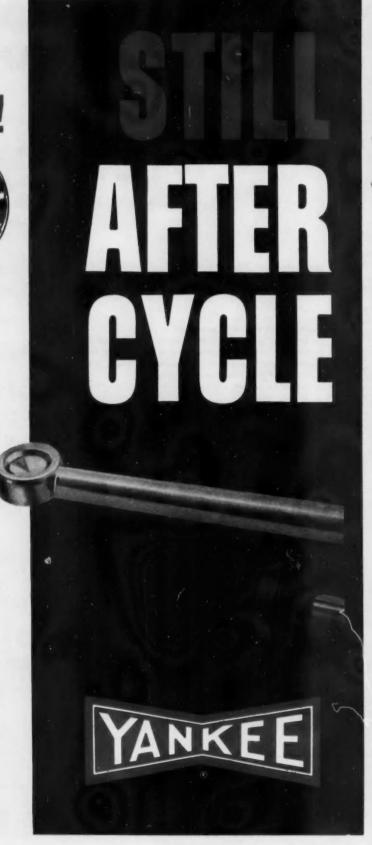




NEW TRAFFIC HAZARD LAW - After

August 1, 1960, all vehicles engaged in interstate commerce - regardless of age - must be equipped to flash two front and two rear turn signals simultaneously as a traffic-hazard warning when disabled on the road. YANKEE'S "Turnflex" Signal Switch meets all requirements for this regulation, whether your vehicles use 4-or 7-wire systems. No. 736 (7-wire) is a combination turn-signal, stop, tail and emergency-warning switch when used with double contact rear signal lamps. No. 730 (4-wire) converts four lamps to turn and emergency-warning signals when used with the heavy-duty flasher. The red disability pull-lever automatically shuts off when signal lever is activated. For more details, write for your free copy of the new YANKEE I.C.C. GUIDE.

YANKEE METAL PRODUCTS CORP Norwalk, Connecticut



1.000.000 TEST!



Although S.A.E. durability specifications call for only 175,000 cycles, this Yankee "TURNFLEX". Signal Switch has successfully withstood the amazing stress of 1,000,000 cycles of operation and still works perfectly! We'll be glad to show you the test results.

Approved in all States where enquired

	_		_			_						1	0	BE	M O	U	NTE	D C	H	_	VE	HICL	E	_				_			
		HEAD LAMPS		L	AIL			STOP LAMPS			EAR ECTOR	18		CLEARA LAMP			818	DEMARN LAMPS			IDE	NTIFICA		N		DIREC	TION		RE	SID EFLEC	E
Over Equipment			e Approved			a Approved			e Approved			e Approved		Cei	er	e Approved		Calo	_	a Approved	r (Bets)	Golo		e Approved		C	Hor	Approved		Ce	lor
-	Numbe	Code	Must B	Numbe	Celler	Must B	Numbe	College	Must B	Numbe	8	Must B	Numbe	Front	Te.	Must B.	Numbe	Frent	Bee	Must Bo	Numbe	Front	Rear	Must B	Numbe	Frest)	Musk	Numbe	Frent	1
	2 2	NS W/A		2 1d	R	-	2/1		1	2	R	-	2/4z	W	R	·	42	A	R		NR			-	NR			J	2/4	A	R
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	2	NSb	Y	2	R	Y	2	R/A/Ye	Y	2	A	Y	2/4	A	R	Y	4	A	R	Y	NR				40	W/A/Ye	R/A/Ye	Y	4	A	R
	2	W/A	Y	2e	R	Y	lec	A/R	Y	1/2k	R	Y	4	A	A/R	Y	NR				NR				4	A/W	A/R	Y	NR		
_	2	W/A	Y	1co	R	Y	100	R	Y	20	R	Y	4	A	R	Y	4	A	R	Y	NR				44	W/A	R/A	Y	4	A	R
-	2	W/A/Ye	Y	1e	R	Y	11	RII	-	1/2k	A/RW	Y	4aa	A/W	A/RW	Y	NA	******		-	2	dd	NR	N	4	Yo/A	Ye/A/Rw	Y	4	A/W	W/RA
-	2	NSa	N	1ev	R	N	1	R/A	N	2we	R	-	2/42	A	R	N	42	A	R	-	NR	******		-	NS	W/A	R/A	N	4	A	R
-	2 2	NSa NSa	N	1ev	A	N	10	R/ye R/ye	H	2	R	-	2/4z 2/4z	A	R	N	42	A	A	Y	NR NR		***	-	WS	W/A	R/A	3	4	A	A
	2	NS.	N	10	R	N	10	A/R	N	20	R	-	2/42	A	R	-	42	A	R	7	NR		****	-	NS	NS	R/Ye R	H	4	A	A
	2	NSa	Y	lev	B	Y	10	A/R	Y	20	R	-	2/42	A		Y	2/42	A	R	Y	NR			Н	NS	W/A	R/A	Y	4	A	A
-	2	Ye/AW	Y	1	B	Y	1	Ye/R	Y	21	R	Y	2n	Ye/A		Y	NS	NS	NS	N	3m		R	N	NS	W/A	R/A	Y	4	A	A/R
	2	NSa	N	lev	R	N	16	R/A	N	2	R	N	2/4z	A	R	N	4z	A	R	N	NR			-	NSf	W/A	R/A	N	4	A	R
	2	Wkk	Y	1e	R	Y	1	Ye/R	Y	2k	R	Y	2/4	Ye/W/A	R	Y	4	Ye/AW	R	Y	3	Yo/AW	R	Y	4	W/A/Y	R/A/Ye	Y	2/4	9	R
	2	W	Y	2	R	Y	1	R/A/Ye	Y	20	R	Y	2/4	A	R	Y	4	A	R	Y	NA	******		Y	NR	Ye	Ye/R	Y	4	A	A
	2	Wa	N	2	R		1	Ye/R		2	R		2/4	A	R		4z	A	R		NR			-	NR	****		N	3/4	A	R
-	2	NSb	Y	1d	A	Y	1	A	Y	NR			2	A	R	Y	4	A	NS	Y	NR				4	A	R	-	NR		
-1-	2	W	Y	10	R	- 4	-	R/A	Y	10	A	Y	2/3m	A/GW	R	Y	NR			-	NR	******			NS				NR	. ,	
	2	Wkk Ye/AW	J	10	R		NR NR	A/R	-	10	R	N N	4m 2	G	R	N	4mz NR	A	R	-	NR	******		H	4 NR	A	A/B	*	NR	****	
-	2	W	N	10	R	N	1	A/R	N	2	R	N	2/42	A	R	N	4z	Α	R	N	NR	****		-	4	NS	R/A	N	NR 2/4	A	n
-	2	w	Y	2	R	Y	2	R/Ye	Y	20	R	Y	411	A/W	R	Y	40	A/W	8	Y	NR		-	-	4	Ye	Ye/R	Y	NA	-	-
-	2	W	Y	10	A	Y	1	A/R	Y	2	R	Y	4	A	A	Y	4	A	R	Y	NA			-	4	A	A/R	Y	4	G	R
	2	w	Y	10	R	Y	1	NS	Y	2/4	R	Y	2/4	A	R	Y	2/4	A	B	N	NR				NS	NS	R	Y	2	A	R
	2	W	N	1cv	R	N	1	R/A	N	20	R	N	2/4z	A	R	N	42	A	R	2	NR				41	W/A	R/A	N	4	A	R
	2	NSb	Y	1	R	Y	1	R	Y	1	R	N	2m	A/G	R	Y	NR	******	***		NA				NS	NS	R	Y	NR		
_	2	Wkk	N	1	R	N	1of	Yo/RA	Y	2	R	N	2/4	A	A	N	2/4	A	R	N	NR				NR	****			2	A	A
-	2	NSa	Y	10	n	Y	1	N8	Y	2	R	-	40	A	R	Y	20	A	R	1	NR			-	NS.	NS	NS	Y	4	A	A
-	2	Ye/AW	Y	20	R	- 4	2	R Water	-	1/2k	R	-	NR	******		-	NR	******		-	NR	*****		-	4	Ye/A	-	Y	NR		
	2 2	NSa Ye/W		26 2h	R		10	Ye/R/A	1	2	R	4	2/4z 4z	A	R	-	42 4/6z	A	R	-	NR 3	A	R		4	W/A	R/A/Ye	-	4/8	A	R
-	2	NSb	Y	14	R		-	A/R	-	2	R	-	2/4	A	B	-	4	A	R	1	NR	-	-	-	-	NS	R/A/Ye	F	-	A	R
-	2	NSb	Y	1	R	- -		R	-	NA		-	2	A	R		NR				NR			-	NS	NS	A		NR		
	2	W	Y	1c	R	-	1	Ye/R	Y	2	R	N	4	A	B	N	4	A	R	N	NR				NS	****		-	4	A	R
	2	W	Y		R	_1_		R/AYe	_		R	1	4	A	R	1	4	A	R	1	NR				NS	Ye/A	B/A/Ye	Y	4	A	R
_	2	NSb	Y	_	A		-	_	1		R		2/4z	A	R	1	2/4z	A	R	1	NR	*****			2/4	A	R		2/4	A	R
L.	2	_	Y		-	_1_	11	_	1	1	A	- -	2m	A	R	-1-	4m	A	A		13	A	R	N	2/4	Ye/A		-	4	A	R
_	-	A/W	Y		R		1	-	1	-	R	-	2/4z	A	R	-1-	4z	A	R		NR	*****		-	4	Ye/A	-	-	4	A	A
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-	2	-	1		R	-	1		-	-	R		2/42		R		42	A	R	- -	NA			-	4	A	R/A/Ye	-	-	A	R
-	-	NSa	1		-	- -	Y 1	-		28	R	-	2/42	-	R		4 4z	A	R	- -	NR	_		-	40	-	-	-	4	A	R
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The warranty reads like new . . . 90 DAYS OR 4,000 MILES. The price tag reads a lot less than new! That means you save two ways.

How can reconditioned engines and parts have a new warranty? The secret is quality control.

First, only Genuine Ford Parts are used.

And manufacturing methods and equipment in the Ford Authorized Reconditioners Plants are right up to date, to maintain tolerances, calibrations, and adjustments you can depend on.

But there are other ways you save, too. You keep your Fords all Ford . . . and that means you get reliability that saves money.



And since Ford Authorized Reconditioned Small Parts are built to original Ford specifications in tolerance and materials, they'll help your Fords keep their original performance characteristics . . . and that means money saved on *upkeep*, *gasoline*, and *downtime*.

So, why not take full advantage of your Ford Dealer's one-stop parts service the next time you place your regular parts order? Ask your Ford Dealer about the one and only Ford Authorized Reconditioner Program. You'll be money ahead if you do!

FORD

HERE'S EXTRA PROTECTION FOR YOUR FLEET!

All new replacement parts used in reconditioning are Genuine Ford Parts



MUD GUARD REQUIREMENTS

M UD guard provisions are included in the motor vehicle requirements of 27 states. States and their requirements are charted below.

In general, the basic requirement is that rear wheels must be protected at the top and rear by the vehicle's body or by metal protectors, flexible flaps, or some other protective means which will minimize spray or splash to the rear, and which are at least as wide as the tires they protect.

These general requirements are referred to in the chart as "Basic." Additional requirements are listed in the footnotes. It should be noted that there are some minor variations even in the basic requirements from state to state.

Under the heading "Vehicles Affected," the word "All" includes trucks, tractors, trailers, semi-trailers, pole trailers and buses.

Revised to March 25, 1960.

State	Vehicles Affected	Flor	uirements	Exemptions	State	Vahicles Affected	Rec	pulrements	Exemptions
Alaska	Trailers and semis manu-	Must I	e adequate	None	N. H	All	Basic,	as approved	Name
Ark	1956 Trailers and samis over		Basic	None	M. J	All over 3 tens, gress	Basic,	as approved	Pole trailers, dump trucks, tanks, and vehicles re- quiring complete wheel freedom
	10,000 lb capacity under Arkansas Commerce Commission jurisdiction				N. Y	All	Basic.	See Note 12.	None
Cal	All over 1800 Ib net weight		Basis	Hone	Ohle	All ever 3 tens QVW	Basic.	See Note 4.	Nane
Conn	All ever 3 tons GVW		Basis	Farm Vehicles. Others	Okia	All		Basic	Animal-drawn vehicles and farm tracters
				requiring complete wheel freedom.	Ore	All	Basic.	See Note &	Truck chassis not serviced for healing a
Qa	All	Basic.	See Note 1.	Hone					load. Truck, trailer or
ldaho	All	Basic.	See Note 6.	None					with bunks
10	Trucks, trailers, semis	Basic.	See Note 2.	See Note 2.	Pa	All commercial vehicles	Basic.	See Note 7.	None
Maina	Trucks, trailers, semis		Basic	Trucks under 3-tons registered grees weight,	R. L	All over 3 tens GVW		Basic	Vehicles requiring com- plets wheel freedom
				dump trucks, truck- tractors, and farm trucks with stake bodies that extend not less	Tenn	All with carrying capacity of over 3000 ib	Basic,	as approved	Farm vehicles. Vehicles used exclusively for hauling hogs
				than 8 ft. beyond rear axis.	Texas	fload-tractors, trucks, truck-tractor with semi- trailor or trailor with 4	Basic.	See Note 9.	Pole trailers truck-tracter without semi-trailer.
Mass	All		Basic	None		or more tires on rear.			
Mich	Trucks, trailers, semis	Basic.	See Note 3.	Truck-tracter traveling	Utah	All commercial vehicles	Basic.	See Note 10.	Buses
				ever 25 mph.	Vt	Buses, trucks, trailers, and semi-trailers.		Basic	Farm tractors and pole trailers.
Minn.	Trucks, irailors, samis	Basic.	See Note 4.	Pule trailers. Rear and dump trucks	Va	All with gross weight over 22,500 in	Basic,	as approved	Vehicles used exclusively for hauling hogs
Miss	All over 18-tone GVW	Basic.	See Note 5.	Pole trailers, dump trucks and trucks carrying an "F" license	Wash	All		Basic	None
Nebr	All new vehicles purchased after Jan. 1, 1956		Basic	None	Wisc	Truck-tractors and inter- city trucks and semi- trailers	Basic.	See Note 11.	Vehicles equipped with dump bedies

 Ground clearance under any loading conditions must not be more than 1/5 of the distance from center of rearmost axis to center of flaps.

2. Illinois requires either flat type or contour splash quards. Flat type shall be installed to within 8 in. of the road (when fully loaded). Contour type may be of flexible or rigid material, ground clearance must be 10 in. (when fully loaded), must parallel tread surface through top rear quarter of tires (or to within 2 in. of body if clearance between body and tires is less than 5 in.), must be as wide as tires and must be mounted within 6 in. of tire (when fully loaded) and have lip or flange on outside edge extending at least 2 in. below flap bottom surface. Exemptions include motor vehicles the construction of which does not require splash guards, in-transit vehicles capable only of using temporary splash guards approved by the Illinois State Highway Folice, and pole trailers.

3. Guards must ber water or other road surface substances thrown from the rear wheels at tangents exceeding 22% deg measured from the road surface. If flap type device is used, if must not have attached any type of lamp, reflective material or reflecting buttons, nor can the device astend beyond the maximum width limit of the vehicles.

4. Ground clearance cannot be more than 1/5 of the horizontal distance from the center of the rearmost sale to the flop under any conditions of loading or operation and must be at least

as wide as the tires. If rear wheels are not covered at the top by fenders, protective means must extend at least to the center of the rearmost axis.

5. Ground clearance cannot be more than 1/5 of the distance from the center of the rearmout axie to the center of the flaps under any conditions of loading. Commissioner of Public Safety may exempt vehicles whose design and construction are such that the purposes of the act cannot be met. If rear wheels are not covered at top, flaps must extend to a point directly above the rearmost axie. Lamps or wiring must not be attached to protectors or flaps.

b. Trucks equipped with a body and buses, bus trailers, semitraliers and trailers must have the rear wheels guarded from a point above and forward of the center of the tire over and to the rear of the wheel to a point not more than 10 in. above the highway surface when the vehicle is empty. Trucks not equipped with bodies must have quards behind the rear wheels downward from a point not lower than halfway between the center of the wheels and the top of the tires on such wheels to a point not more than 10 in. from the highway surface when the vehicle is empty. All other motor vehicles must have guards behind all wheels, from a point not word of the top of the tire over and to the rear of the wheel to a point not more than 20 in. above the highway surface.

7. Device must bar water and other road surface substances thrown from the rear wheels at

tangents exceeding 221/2 deg measured from the road surface and passing in a straight line to the rear of the vehicle.

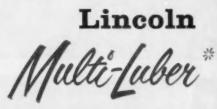
8. Ground clearance cannot be greater than 1/5 the horizontal distance from the center of the axis to the flap. Devices must be of a type approved by the Commissioner of Safety, Lamps, wiring or reflectorized material must not be attached to the flaps.

9. Guards or flaps must extend to within 8 in, of the highway surface and must be of approved type.

ii). Ground clearance cannot be more than ½ of the diameter of the rear axie wheel or not more than 1/5 of the distance from the center of the axie to the flap under any condition of loading. If rear wheels are not covered at the top, the protective means must extend to at least the center line of the rearmost axie.

11. Ground clearance cannot be more than 1/3 of the horizontal distance from the center of the rearmost axie to the flap under any conditions of loading or operation; and must be at least as wide as the fires. It rear wheels are not covered at top by fenders, protective means must extend at least to the center of the rearmost axie.

12. Must be substantial and reasonably flexible Ground clearance may not exceed 1/3 of horizontal distance from flap to point of contact of wheel with ground.



Automatic Lubrication System ARKI-

"At Sect, we were therefore bout the Study all thought all thought now," mayo Rob Wite of Bob's Yruch Service: Middletown.

world of difference MULTI-AUBITES made in the operation of our tractors and trailtion of our tractors are now.
Steering is justice, there's no
more conting of train plans,
the wheels are trail our cost
of quantum last been reduced
to such an ertest that we are
eventually going to fastell
MULTI-AUBITES on all of

Keeps this fleet on the go



Many other fleet operators share Mr. Wise's enthusiasm for Lincoln MULTI-LUBERS. This modern method of lubricating over-the-road equipment while it's on the move saves many hours and dollars of costly lubrication down-time. In effect, the brake pedal becomes a lube gun. Each sixth time it is applied, it delivers the exact measured amount of refinery pure lubricant required to all bearings simultaneously, under high pressure. The MULTI-LUBER System is completely sealed against dust, mud, snow, ice and other contaminants.



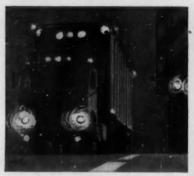
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Here's how new U.S. ROYAL answers all 6 tire problems...



1. What has been done to raise my tire mileage?

New compounding and processing techniques, plus a wider, flatter tread, have reduced road scuff, cut flexing and diminished heat. Result: U.S. Royal Fleet Carriers step up mileage performance as much as 25%.



2. What's my guarantee of a stronger carcass?

New materials, new construction make U. S. Royal Fleet Carriers the most rugged truck tire. Every tire is virtually custom-engineered by size, cord construction, tread design for maximum tire strength—more and better recaps.



3. How can I reduce hazards of cuts & bruises?

The natural rubber in Fleet Carriers is reinforced with polyisoprene. Heattreated grooves reduce strains, cut growth. New shock pads and two top layers of steel cable give extra protection on extra-rough terrain.



4. How do I know I'll get more braking safety?

New U.S. Royal Fleet Carriers' construction and tread design provide up to 79% better traction, safer stopping and starting. Extra "gripping" area and extra traction edges mean more stability, more mileage on all kinds of roads under all weather conditions.



5. Can I be sure of improved skid resistance?

In U.S. Royal Fleet Carriers, circumferential slotting has been engineered into the tread for the first time. These slots, plus lateral slots and notched rib design, provide 2,000 or more inches of gripping edges for up to 49% more skid protection.



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Simply put your tire investment into U.S. Royal Fleet Carriers. They cost no more than ordinary tires...yet they give as much as 25% more mileage. This, plus operating economies, mean savings you can't afford to ignore, whether your fleet is large or small.

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"FLEET CARRIER"

Better Rubber...Balanced Engineering Tell the Story

NEW COMPOUNDING TECHNIQUES!

Amazing new man-made rubber, polyisoprene, fortifies the natural rubber. Low heat build-up, more uniform quality.

NEW CORD ENGINEERING!

Atomic ray devices for automatically uniform cord ply coatings. Rayon constructions or Nylon (double strength in larger sizes).

NEW SHOCK PADS!

New materials, more adhesion, greater strength. More protection of cord body . . . less heat build-up.

SAFETY STEEL SHIELD!*

Two layers of high-carbon steel cables under the tread make tires virtually immune to cuts and ruptures in the tread area.

CUSTOM ENGINEERING!

Custom manufacturing equipment for rayon, nylon, Safety Steel Shield...processes each differently to realize maximum inherent capabilities of each tire type. New in-mold tempering process controls nylon-tire growth and the stresses in the rubber that could lead to tread cracking.

*U. S. PATENT NO. 2,786,507

Up to 79% Safer Stopping! Up to 49% Greater Skid Safety!

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TIRE A	77% MORE	48% MORE
TIRE B	24% MORE	17% MORE
TIRE C	66% MORE	44% MORE
TIRE D	79% MORE	49% MORE



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VEHICLE INSPECTION LAWS

THE chart below spells out highlights of the basic provisions in states and cities requiring vehicle inspection. It is presented primarily for the benefit of fleet operators who have or who contemplate having vehicles registered in "foreign states or cities." After noting the basic provisions, refer to the notes below.

Although subject to local variation, the American Assn. of Motor Vehicle Administrators and the Assn. of Casualty and Surety Companies are sponsors of a generally accepted standard for vehicle inspection. If you'd like a copy, write American Standards Assn., 70 East 45th St., New York 17, N. Y. Ask for "American Standard Inspection Requirements for Motor Vehicles, D7.1-1956." The price is \$1 per copy.

	VEHICLES AFFECTED	EQUIPMENT	METHOD	FREQUENCY	PEE
STATES					
Colorado Delaware Delaware Delaware Delaware Delaware Delaware Delaware Maneachusetts Maseachusetts Maseachusetts Maseachusetts Maseachusetts Maseachusetts Maseachusetts Maseachusetts Maseachusetts Maseachusetts New Jorey New Maxico New York Pennsylvania Rhode leland Tuusa. Utah Versonnt Virginia West Virginia	Note 4 All All All All All Note 12 Note 14 Note 18 Note 20 All	All All Note 6 All Note 6 All Note 10 Note 10 Note 10 Note 12 Note 21 All Note 21 All Note 23 Note 23 Note 10 Note 23 Note 10 Note 23 Note 10 Note 23 Note 10	Authorized stations State inspectors Obstrict inspectors Authorized stations Authorized stations Authorized stations Authorized stations State inspectors Authorized stations State inspectors Authorized stations	Note 1 Note 2 Annually Note 8 April, Oct. April, Oct. Note 28 Note 28 Note 11 Annually Note 28 Note 28	Note 1 None 3 \$1.00 Note 6 60 ¢ 51.00 \$1.00 \$1.00 Note 27 Note 27 Note 28 \$1.00 \$1.00 \$1.00 \$1.25
CITIES					
Chicago, III. Springfield, III. Des Moines, Iewa. Omaha, Nebr.	**********	**********	City inspection stations City inspection stations Authorized stations City inspection stations City inspection stations	Annually Somi-annually Somi-annually Note 28	None None 80¢ 50¢
Cincinnati, Ohio	********	********	City testing stations City testing stations	3 per year	*****

Revised to March 25, 1980

Reference Notes

Note 1. Semi-annually—Apr.-May and Oct.-Nov. Fee not over \$1.50.

Note 2. Annually, during three months prior to expiration of registration.

Note 3. In Illinois all trucks and tractors as well as buses, trailers and semi-trailers over 3000 lb gross must be inspected and secure a "certificate of safety" prior to registration and semi-annually thereafter.

Note 4. Trucks and buses, except those subject to ICC safety requirements and buses subject to Illinois Commerce Commission safety and inspection requirements.

Note 5. Brakes, lights, horns, reflectors, mufflers, rear vision mirrors, safety chains, frame, axles, cab, body, wheels, steering, safety devices. Note 6. Semi-annually — Apr. and Oct. except Cook County where period is Mar.-May and Sept.-Nov. Fee is \$1.00 or more, usually \$1.00 per axle.

Note 7. Brakes, lights, horn, muffler, steering gear, windshield, windshield cleaner, number plates and rear windows.

Note 8. Brakes, lighting equipment, steering mechanism, horns, mirrors, windshield wipers and other equipment.

Note 9. Annually or semi-annually. Note 10. Mechanism, brakes and equipment.

Note 11. At least twice, but not more than three times per year.

Note 12. Motor vehicles and trailers over 4 years old, and all used vehicles when transferred.

Note 13. Brakes, lights, steering, wheel alignment, and other equipment.

Note 14. Metor vehicles, trailers and semi's, except trailers and semi's. of less than 1000 lb chassis and body weight.

Note 15. Steering mechanism, brakes, lights, horns, warning devices, mirrors, windshield wipers.

Note 16. Passenger cars: May 1-July 31, Nov. 1-Jan. 31; Commercial vehicles: Aug 1-Oct. 31, Feb. 1-April 30.

Note 17. Not set by law. Usually \$1.00 to \$1.50.

Note 18. All vehicles, trailers, semi-trailers and pole trailers over one year old.

Note 19. Brakes and other mechanical equipment as designated by motor vehicle registrar.

Note 20. All vehicles except: trailers and semi's with gross weight of 4000 lb or less; farm machinery, tractors, and trailers; vehicles of factory model 1935 and earlier if not driven on federal or state highways.

Note 21. Brakes, lighting equipment, horns, warning devices, mirrors and windshield wipers.

Note 22. During May and October, dates set by Road Commission.

Note 23. Mechanism and equipment. Note 24. Semi-annually, between May 1 and June 15 and between October 1 and November 15.

Note 25. Annually, between July 1 and September 30.

Note 26. Semi-annually. Temporarily reduced to annually until inspection station congestion is relieved.

Note 27. Subject to approval by Commissioner.

Note 28. Annually or semi-annually. Note 29. \$2.00, except \$1.00 for passenger cars and commercial vehicles of 10,000 lb GVW or less not including buses.

Get the Facts of Life!

(TRUCK LIFE, THAT IS)



ASK YOUR DEALER ABOUT EATON 2-SPEED AXLES

Your truck dealer will tell you how Eaton 2-Speed Axles can extend the life of your trucks by thousands of trouble-free, low-cost miles.

By reducing engine rpm in relation to vehicle speeds, Eaton 2-Speed Axles hold down wear on engines and all power transmitting units. They add to miles travelled and number of loads carried between engine overhauls; they reduce maintenance costs; keep trucks on the road, out of the shop. Your dealer will also tell you that trucks equipped with Eaton 2-Speed Axles bring higher allowances when traded in.

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MANUFACTURING COMPANY
CLEVELAND 10, OHIO

COMMERCIAL CAR JOURNAL, April, 1960

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When you own a Dodge, you've got the best in truck transportation. Protect your investment (and your profit) with genuine MoPar parts.

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Service works for you:



SPECIAL "TROUBLE-SHOOTER" FIELD FORCE.
MoPar truck experts know what it means to have
a truck sidelined for lack of repair parts. When
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"HOT WIRE" ORDERING SERVICE. When parts are not in stock locally, your Dodge Truck Dealer or MoPar Wholesaler will hit the "hot wire." Shipments are made "round the clock" from MoPar's parts plants—including Saturday and Sunday!

TO GET PARTS-DUBL-QUICK-PHONE YOUR DODGE TRUCK DEALER OR MOPAR WHOLESALER



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DODGE TRUCKS in action!

COMMERCIAL CAR JOURNAL, April, 1960

STATE TAX GUIDE

FLEET groupings considered in this guide are

- 1. Trucks
 - a. For-hire
 - (1) Common carrier
 - (2) Contract carrier
 - b. Private
- 2. Buses
 - a. Common carrier
 - b. Charter

Unless otherwise indicated as applying to one or more of the above groups, the taxes and fees listed are levied on all types of fleets. Note: Space does not permit listing of exceptions to the taxes, such as certain weight classes (usually above a specified GVW) or a particular type of carrier (for example: household goods), so you may find you are exempt from some of the taxes listed as applying to your general grouping.

While not all states have the same kind of taxes, the most common ones you'll find (with different names in different states) include....

- Property taxes—usually levied on a per vehicle basis and must be paid before vehicle can be registered in most cases.
- Sales taxes—usually included at time of vehicle purchase.
- Fuel taxes—very few fuels are exempt. Many states also have a "fuel use" tax requiring interstate operators to pay the state's fuel tax on all fuel used in that state even if it was bought outside.
- Registration fees—basic charges by state's motor vehicle department for privilege of using highways.
- Regulatory fees—charges levied by utility commissions to pay for regulation of for-hire carriers. Three most usually found are (1) operating authority certificate fee, (2) vehicle permit plates, (3) gross receipts tax.
- "Third Structure"—Use tax in addition to registration fees and fuel taxes, often called "mileage," "weight-distance" or "ton-mile."
- Retaliatory taxes levied by states on vehicles from those states imposing a weight-distance tax or similar "third structure" tax not subject to reciprocity.

ALABAMA — Ad Valorem Tax, Sales and Use Tax, Gasoline Tax, Use Fuel Tax, Registration Fee, Operating Authority Certificate Fee and Vehicle Plates (except private trucks), Seat-Mile Tax (buses only), Axle-Mile Tax (for-hire trucks only), Trip Permit Fee (for-hire trucks only).

ALASKA — Property Tax, Fuel Tax, Registration Fee, Certificate of Title Fee.

ARIZONA — Uniform Auto Lieu Tax, Privilege (sales) Tax, Gasoline Tax, Use Fuel Tax, Registration Fee, Operating Authority Certificate Fee and Vehicle Plates (except private trucks), License (gross receipts) Tax (except private trucks), Gross Income (sales) Tax (private trucks only).

ARKANSAS — Personal Property Tax, Sales Tax, Fuel Tax, Certificate of Registration Fee, Certificate of Title Fee, Registration Fee, Operating Authority Certificate Fee and Vehicle Plates (except private trucks), Pro-Rata Registration (buses only).

CALIFORNIA—Sales and Use Tax, Gasoline Tax, Use Fuel Tax, Registration (Primary, Weight and License) Fees, Operating Authority Fee (except private trucks), Gross Receipts Tax (except private trucks), Pro-Rata Registration, Trip Permit Fee.

COLORADO — Specific Ownership Tax, Sales and Use Tax, Fuel Tax, Registration Fee, Operating Authority Fee, Mileage Tax, Pro-Rata Registration, Trip Permit Fee.

CONNECTICUT — Sales and Use Tax, Gasoline Tax, Special Fuels Tax, Fuel Use Tax, Certificate of Title Fee, Registration Fee, Excise (Income) Tax (intrastate buses only), Gross Receipts Tax (interstate buses only), Operating Authority Certificate Fee and Vehicle Plates (for-hire trucks only), Pro-Rata Registration (common carrier buses only).

DELAWARE—Gasoline Tax, Diesel Fuel Tax, Registration Fee, Occupational Tax (buses only).

DISTRICT OF COLUMBIA — Fuel Tax, Vehicle Inspection Fee, Certificate of Title Fee, Excise (or Titling) Tax, Registration Fee, License (mileage tax) Fee (common carrier buses only), License Tax (for-hire trucks and charter buses only).

FLORIDA — Sales and Use Tax, Gasoline Tax, Special Fuel Tax, Fuel Use Tax, Registration Fee, Operating Authority Certificate Fee (except private trucks), Operating Authority Vehicle Plates (for-hire trucks only), Optional (in lieu of registration fee) Mileage Tax (except private trucks), Pro-Rata Registration (buses only).

GEORGIA—Personal Property Tax, Sales and Use Tax, Fuel Tax, Fuel Use Tax, Registration Fee, Operating Authority Certificate Fee and Carrier Registration Tax (except private trucks), Highway Use Permit Fee (except buses), Round Trip (retaliatory tax) Fee (except buses), Pro-Rata Registration (buses only).

HAWAII — Fuel Tax, Registration Fee, Gross Receipts Tax.

IDAHO—Gasoline Tax, Special Fuel Tax, Registration Fee, Use (weight-distance tax) Fee, Operating Authority Fee (except private trucks), PUC Administrative (gross receipts tax) Fee, Trip Permit Fee.

ILLINOIS — Sales and Use Tax, Fuel Tax, Vehicle License Fee, Registration (Flat Weight Fees or Alternative Mileage Tax) Fees, Operating Authority Initial Application Fee and Annual Renewal Fee (for-hire trucks only), Pro-Rata Registration.

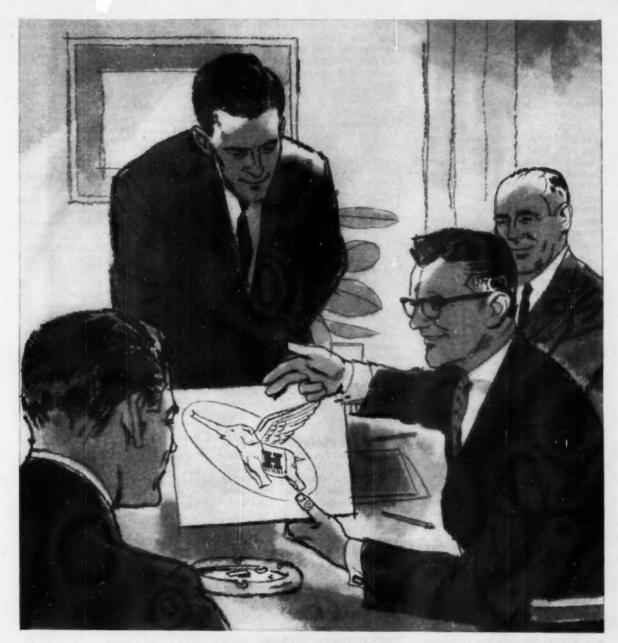
INDIANA — Gasoline Tax, Special Fuels Tax, Certificate of Title Fee, Registration Fee, Operating Authority Certificate Fee (except private trucks), PSC Vehicle Registration Fee (except private trucks), Gross Income (gross receipts) Tax (except private trucks).

IOWA—Use or Sales Tax, Gasoline Tax, Special Fuel Tax, Fuel Use Tax, Registration Fee, Operating Authority Fee (except private trucks), Pro-Rata Registration, Trip Permit Fee (buses and common carrier trucks only).

KANSAS—Personal Property Tax, Sales or Use Tax, Gasoline Tax, Special Fuels Tax, Fuel Use Tax, Certificate of Title Fee, Registration Fee, Operating Authority Fee, Regulatory Fee, Pro-Rata Registration, Trip Permit Fee.

KENTUCKY — Personal Property Tax, Sales and Use Tax, Gasoline Tax, Special Fuels Tax, Fuel Use Tax, Registration Fee (except buses), Seat (registration) Fee (buses only), Mileage Tax (buses only), Operating Authority Fee and Vehicle Cab Cards

(TURN TO PAGE 300, PLEASE)



This is "Packy" - the flying elephant - our new symbol the mark of quality and leadership found in the products manufactured by Highway Trailer

Pack'y (pak'i), n. Short for the word pachyderm and/or packing. 1. He is a flying elephant who moves through the air with the greatest of ease.

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STATE TAX GUIDE

Continued from Page 298

(except private trucks), Excise Tax (for-hire trucks only).

LOUISIANA—Sales Tax, Gasoline Tax, Use Fuel Tax, Lube Oil Tax, Registration Fee, Operating Authority Certificate Fee and Vehicle Permits (except private trucks), Inspection and Supervision (gross receipts) Fee (for-hire trucks and common carrier buses only), Public Utility License (gross receipts) Tax (for-hire trucks only).

MAINE—Sales and Use Tax, Gasoline Tax, Use Fuel Tax, Fuel Use Tax, Vehicle Excise Tax, Personal Property Tax, Registration Fee, Operating Authority (per vehicle) Fee (common carrier buses only), Operating Authority Certificate Fee and Vehicle Permits (for-hire trucks only), Pro-Rata Registration (buses only),

MARYLAND—Excise Tax, Certificate of Title Fee, Gasoline Tax, Special Motor Fuels Tax, Fuel Use Tax, Registration Fee (except common carrier buses), Seat-Mile Tax (common carrier buses only).

MASSACHUSETTS—Motor Vehicle Excise Tax, Gasoline Tax, Use Fuel Tax, Registration Fee, Operating Authority Application Fee and Vehicle Permits (for-hire trucks and common carrier buses only).

MICHIGAN—Sales and Use Tax, Gasoline Tax, Diesel Fuel Tax, Registration Fee, Operating Authority Fee (except private trucks), Privilege (mileage tax) Fee (except private trucks).

MINNESOTA — Gasoline Tax, Use Fuel Tax, Registration Fee, Operating Authority Certificate Fee and Identification Plate Fees (except private carriers), Pro-Rata Registration (buses only).

MISSISSIPPI — Personal Property Tax, Sales and Use Tax, Gasoline Tax, Use Fuel Tax, Registration (License Plate Fee and Privilege Taxes) Fees, Mileage Tax (private trucks only), Operating Authority Fee (except private trucks), Annual Vehicle Inspection Fee (except private trucks), Vehicle Identification Plate Fee (except private trucks), Trip Permit Fee (except private trucks).

MISSOURI—Personal Property Tax, Sales Tax, Certificate of Title Fee, Gasoline Tax, Special Fuels Tax, Registration Fee, Operating Authority Certificate Fee (except private trucks).

MONTANA — Personal Property Tax, Gasoline Tax, Special Fuels Tax, Fuel Use Tax, Registration Fee, Gross Vehicle Weight Tax, trucks only), Seat Tax (buses only), Operating Authority Fees (except private trucks), Highway Compensation (per vehicle) Fee (except private trucks), Gross Revenue Tax (except private trucks), Pro-Rata Registration.

NEBRASKA—Personal Property Tax, Certificate of Title Fee, Gasoline Tax, Use Fuel Tax, Registration Fee, Operating Authority Fee and Administrative (per vehicle) Fees (except private trucks), Retaliatory Tax, Pro-Rata Registration.

NEVADA—"In-Lieu" Property Tax, Sales and Use Tax, Gasoline Tax, Use Fuel Tax, Registration Fee, License Tax (except private trucks), Alternative (in lieu of License Tax) Mileage Tax (for-hire trucks only), Pro-Rata Registration, Trip Permit Fee.

NEW HAMPSHIRE—Gasoline Tax, Special Fuels Tax, Registration Fee, Annual PSC Vehicle Registration Fee (buses only), Operating Authority Certificate and Vehicle Plate Fees (for-hire trucks only), Retaliatory Tax.

NEW JERSEY—Fuel Tax, Registration Fee, Municipal Franchise (gross receipts) Tax (common carrier buses only), Mileage Tax (buses only).

NEW MEXICO—Excise (sales)
Tax, Gasoline Tax, Special Fuels Tax,
Registration Fee, Operating Authority Certificate Fee (except private
trucks), Annual Equipment List (per
vehicle) Fee (except private trucks),
Gross Income (gross receipts) Tax
(except private trucks), Port of Entry
(mileage) Tax (except private trucks),
Pro-Rata Registration.

NEW YORK—Gasoline Tax, Diesel Fuel Tax, Registration Fee, Operating Authority Certificate Fee except private trucks), Truck Mileage Tax.

NORTH CAROLINA — Sales and Use Tax, Certificate of Title Fee, Gasoline Tax, Special Fuels Tax, Fuel Use Tax, Registration Fee (except common carrier trucks and buses), Registration (Vehicle License Tax and Gross Receipts Tax) Fees (common carrier trucks and buses only), Operating Authority Certificate Fee and Equipment Registration Fees (except private trucks), Trip Permit Fee. (Note: Common carrier trucks may elect to pay contract carrier truck Registration Fee in lieu of combination License Tax and Gross Receipts Tax.)

NORTH DAKOTA—Sales Tax or Motor Vehicle Excise Tax, Certificate of Title Fee, Gasoline Tax, Special Fuels Tax, Registration Fee, Non-Resident Mileage Tax (except buses), Operating Authority Fee (except private trucks), Vehicle Identification Tag Fees (for-hire trucks only), Pro-Rata Registration.

OHIO—Sales and Use Tax, Special Fuels Tax, Registration Fee, Highway Use (axle-mile) Tax (except buses), Annual Capacity (per vehicle) Fee except private trucks).

OKLAHOMA—Excise (sales), Tax, Gasoline Tax, Special Fuel Use Tax, Fuel Use Tax, Registration Fee, Operating Authority Certificate Fee and Vehicle Identification Plate Fees (except private trucks), Mileage Tax (common carrier buses only), Pro-Rata Registration (buses only).

OREGON—Gasoline Tax, Use Fuel Tax, Registration Fee, Transportation (mileage) Tax, Operating Authority Certificate Fee and Vehicle Identification Plate Fees, Pro-Rata Registration.

PENNSYLVANIA—Sales and Use Tax, Certificate of Title Fee, Gasoline Tax, Use Fuel Tax, Registration Fee, Operating Authority Fee (except private trucks), Excise (gross receipts) Tax (except private trucks).

RHODE ISLAND—Sales Tax, Gasoline Tax, Registration Fee, Operating Authority Fee (common carrier buses only), Operating Authority Fee and Vehicle Plate Fees (for-hire trucks only).

SOUTH CAROLINA — Sales and Use Tax, Gasoline Tax, Special Fuels Tax, Fuel Use Tax, Registration Fee, Vehicle License Fee (except private trucks).

SOUTH DAKOTA—License (sales)
Tax, Certificate of Title Fee, Gasoline
Tax, Special Fuels Tax, Registration
Fee, Operating Authority Fee (except
private trucks), Highway Compensation (per vehicle) Fee, Optional (in

(TURN TO PAGE 302, PLEASE)



- Handles heavy truck work quickly . . . easily . . . accurately yet turns passenger car drums with the speed of a much smaller Lathe.
- Twin Cross Feeds, Carriages, Controls and Boring Bars allow roughing cut and finishing cut at same time or roughing cut and finish wet grind at same time.
- Rugged-1½ H.P. Drive Motor, 4¼" diameter Spindle, 2½" diameter Truck Arbor, Timken Bearings.
- Cross Feed includes Automatic Power Feed for facing disc brakes, clutch plates, etc.
- Instantly adjusted Feeds from .0025" to .025". Feeds and cuts and grinds in both directions for maximum efficiency.

Write today for FREE details on the profit-designed AMMCO Model 5000 Giant "Safe-Turn" Brake Drum Lathe!



AMMCO TOOLS, INC., 2172 Commonwealth Ave., North Chicago, III.

State Tax Guide

Continued from Page 300

lieu of Highway Compensation Fee) Mileage Tax, Pro-Rata Registration.

TENNESSEE — Personal Property Tax, Sales Tax, Gasoline Tax, Special Fuel Tax, Fuel Use Tax, Registration Fee, Operating Authority Fee and Inspection Fee (except private trucks), Pro-Rata Registration (buses only), Trip Permit Fee (trucks only).

TEXAS—Personal Property Tax, Sales Tax, Certificate of Title Fee, Gasoline Tax, Special Fuels Use Tax, Registration Fee, Operating Authority Fee and Vehicle Identification Plate Fees (except private trucks), Motor Carrier Act Administrative Fee (except private trucks), Intangible Assets Tax (except private trucks), Occupation (gross receipts) Tax (except private trucks) (Note: Occupation Tax is in lieu of Intangible Assets

Tax, applies only to first year or less of operation.)

UTAH—Personal Property Tax. Sales and Use Tax, Certificate of Title Fee, Gasoline Tax, Special Fuel Tax, Registration Fee, Operating Authority Fee and Special Identification Plate Fees (except private trucks), Sales (gross receipts) Tax (common carrier buses only), Trip Permit Fee. Alternative (in lieu of Trip Permit Fee) Mileage Tax, Retaliatory Tax.

VERMONT—Gasoline Tax, Registration Fee, Retaliatory Tax (except buses), Sales and Use Tax.

VIRGINIA—Certificate of Title Fee, Gasoline Tax, Special Fuels Tax, Fuel Use Tax, Registration Fee, Non-Resident Corporation Commission Registration Fee (private trucks only), City Street (per mile) Tax (except private trucks), Operating Authority Fee and Vehicle Registration Card Fee (except private trucks), Appraisal and Valuation (gross receipts) Tax (except private carriers), Road (gross receipts) Tax (buses only), Pro-Rata Registration (buses only).

WASHINGTON - Excise (personal property) Tax, Sales Tax, Certificate of Title Fee, Gasoline Tax, Special Fuels Tax, Registration Fee, Additional Temporary (1958-1959) Registration Fees (except buses), Operating Authority Fee (common carrier buses only), Operating Authority Fee and Vehicle Identification Plate Fee (for-hire trucks and charter buses only), Regulatory (gross receipts) Fee (buses only), Public Utility (gross receipts) Tax (buses only), Mileage Tax (buses only), Regulatory Fees (for-hire trucks only), Pro-Rata Division of Regulatory Fees (for-hire trucks only), Pro-Rata Registration, Trip Permit Fee.

WEST VIRGINIA—Personal Property Tax, Sales Tax, Certificate of Title Fee, Fuel Tax, Fuel Use Tax, Registration Fee, PSC Vehicle License Fee (except private trucks), Privilege (gross receipts) Tax (except private trucks).

WISCONSIN — Gasoline Tax, Special Fuels Tax, Registration Fee, Operating Authority Fee and Vehicle Permit Fees (except private trucks).

WYOMING — Sales and Use Tax, Gasoline Tax, Registration Fee, Operating Authority Fee and Vehicle Identification Plates, Compensatory (vehicle-mile) Fees (buses only), Compensatory (ton-mile) Fees (trucks only), Trip Permit Fee.

...the mark with the right connections



Imperial brass fittings . . . the right connections for brake, gas and oil line work. Imperial fittings can help you reduce maintenance costs. Save installation man-hours. Cut downtime. Imperial brass fittings can help protect your investment in the major maintenance program that keeps your fleet rolling. Here's why.

Forging makes Imperial brass fittings stronger than bronze castings or extruded fittings. Means long, dependable service even under the brutal pounding of knocks, shocks, vibrations. Closegrained forged body structure guards against seepage of hard-to-hold liquids and gases.

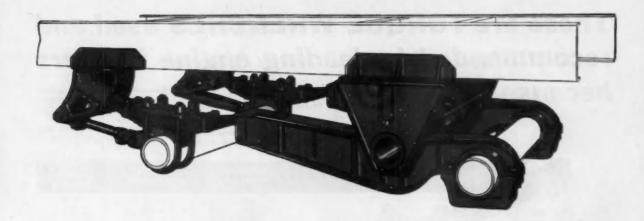
In addition to fittings, Imperial push-pull controls, drain cocks, fuel lines, tools, hose and couplings can help put dependability in your fleet. Look for the Diamond I on the products you buy.

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Write for Bulletin No. R-10

THE MODEL RTS-500 TRAILER SUSPENSION

for Tankers • Vans • Platforms • Frame Dumps – fulfills the unmet needs of the trucking industry.

- CONTROLLED BRAKE REACTION—Neway RTS-500 completely cancels out Brake Hop Tendencies through basic force engineering principles—No Hop or Chatter—Light or Loaded—Shortens Stopping Distance—Saves Tires—Saves Cargo—Saves Trailer—
- STABILITY—Neway RTS-500 provides trailer stability never before experienced in the industry. Through the fixed trunnion and rubber mounted beams—sidesway as such is eliminated. Driver has full control of the trailer in the turns—Can Keep Up His Speed For Fast Time Schedules.
- AXLE WALK—Neway RTS-500 provides, through patented rear axle connections and beam design, controlled extreme axle movements. This flexibility means less load transfer from one axle to the other—Less Frame Twist—Less Cargo Damage—Less Trailer Maintenance.
- WEIGHT—Neway RTS-500 provides all of the above desirable characteristics as standard equipment and still a Neway weighs 100# to 400# less than other tandems. Less Dead Weight—More Payload—Naturally—No Lubrication—It's All Rubber Mounted—

Neway's RTS-500 Will Save On Tires • Increase Payload • Reduce Cargo Damages • Increase Trailer Life • Speed Up Road Schedules • Increase Your profit

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Designers - Engineers - Manufacturers of Suspensions for Trailers - Trucks - Specialized Equipment

These are TORQUE WRENCHES used and recommended by leading engine builders because they are:

- * Faster and Handier to use
- ★ The only torque wrenches that can be used accurately with adapters and extensions
- * Guaranteed accurate within 2% of maximum scale reading
- * Ruggedly constructed for con-tinous service

witt	adapters and exten	sions	
SENSORY MODELS	CATALOG NUMBER	CAPACITY INCH POUNDS	MECHANICS SUGGESTED NET PRICE
The handle RE- LEASES momentarily the instant the pre-set tor- que is reached. Can be set to signal for right or left hand ap-	\$300-1 \$600-1 \$1200-1 \$1800-1 \$2400-1 \$3600-1	0 to 300 0 to 600 0 to 1200 0 to 1800 0 to 2400 0 to 3600 FOOT POUNDS	\$41.00 42.50 44.70 52.78 68.75 91.67
plications over full scale range. You can change setting instantly right on the job. A sharp distinct sound can be heard at the same moment the handle signal is felt or you can see the torque applied on an Easy Vision metal scale which serves as a built in Torque Tester. FEEL IT — HEAR IT — SEE IT.	\$25 \$50 \$100 \$150 \$200 \$300	0 to 25 0 to 50 0 to 100 0 to 150 0 to 200 0 to 300	\$41.00 42.50 44.70 52.78 68.75 91.67
STANDARD MODELS	CATALOG	CAPACITY INCH POUNDS	MECHANICS SUGGESTED NET PRICE
The same as the Sensory model, but is not	F300-1 F400-1 F1200-1 F1400-1 F3400-1	0 to 300 0 to 600 0 to 1200 0 to 1800 0 to 2400 0 to 3600	\$31.00 32.50 34.70 38.89 60.00 76.39
equipped with the signalling feature. A deluxe gauge tool that is guaranteed to remain accurate for life and is engineered to cycle a minimum 300,000 times.	F25 F50 F100 F150 F200 F300	0 to 25 0 to 50 0 to 100 0 to 100 0 to 150 0 to 200 0 to 300	\$31.00 32.50 34.70 38.89 60.00 76.39
ROUND BEAM MODELS	CATALOG NUMBER	CAPACITY INCH POUNDS	MECHANICS SUGGESTED NET PRICE
A torque wrench designed and priced for the mechanic. Guaranteed life time accuracy. Each model in the wide range of torque capacities is light weight and compact in design. The torque accuracy is held to the highest standard 2% of the maximum scale reading. Patented handle allows using these with adapters and rugged construction makes them almost indestructible.	DR25-I DR50-I DR100-I DR200-I DR200-I R600-I R1200-I R1200-I R2400-I	0 to 25 0 to 50 0 to 100 0 to 100 0 to 200 0 to 300 0 to 600 0 to 1800 0 to 1800 0 to 25 0 to 50 0 to 50 0 to 150 0 to 50 0 to 150 0 to 150 0 to 150 0 to 100	\$20.00 20.00 20.00 20.00 20.00 20.00 13.89 14.72 18.61 20.00 13.89 14.72 18.61 20.00
SPRING TESTER	Free TO	RQUE SPECIF	ICATIONS
Permits fast and accurate matching and checking of valve springs, clutter springs, etc. Threaded column with vernier scale permits adjustment test platform to exact test length with .003 of an inch. Built in tone sign device sounds the instant spring is compressed to desired length. Operated any accurate torque wrench. Springstrength, in pounds, equals the for pound reading of the torque wrench.	of automol tractors, ou marine and gines. SPA BEARING DATA and the torque chain of -No. 4 to in large 2 in pages of proved in the spanning spanning on the proper automoly of the spanning spann	O makes and more than biles (U.S. and Foreign thoards, motorcycles, died a small air-cooled en-RK PLUG-WHEEL-VALVE SPRING domany helpful Plus handy ret for all screws and including each bolts. 31 factory approximation. if requested to service lethead. Please name of your lobber.	a), trucks,

World's Leading Exclusive Manufacturers of Torque Wrenches

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ADDISON QUALITY ILLINOIS

CHECK FOUR SPECS

SELECTION

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SECTION

1960 TRUCK SPECIFICATIONS

KEY TO DEFINITIONS

MAKE AND MODEL

Only Domestic Truck Models are

OPTIONAL UNITS

For the express purpose of best fit-ting the truck to the individual job most of the models listed can be pro-vided with optional engines, trans-missions, axles, etc., and these mod-els when so equipped are considered standard stock models.

RECOMMENDED

GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

FOR NORMAL SERVICE.
The Gross Weights published herewith are those supplied by manufacturers as their Recommended Gross
Vehicle Weights for Normal Operating Conditions, and are based upon
the Maximum Authorized Tire Size
listed. In actual practice the manu-

facturer may either increase or de-crease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road con-ditions, etc., the gross weights that a manufacturer is prepared to recom-mend will vary with particular con-ditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

CHASSIS WEIGHT
The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the weight of the Cab. This applies to

C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List

MAXIMUM AUTHORIZED TIRE SIZE

THE SIZE

The tire size listed in this column is
the maximum size recommended by
the manufacturer of the chassis for
the Gross Vehicle Weight for Normas Operating Conditions. It is
furnished at extra cost, if it differs
from the standard size. Dual rears
are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamom-eter reading without accessories.

GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS

Unless given the designation (N)—meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO ABBREVIATIONS

MAKES-ALL

All—Allison Div., General Motors Corp. B—Bendix.

BL—Brown-Lipe.
Bu or Bud—Buda.
BW—Bendix-Westing-

house,
C—Chevrolet.
Cl or Cla—Clark,
Con—Continental.
Cu or Cum—CumminsDiesel.
Deu—Deutz Air Cooled
Diesel engine.
Eat—Eaton,
F—Ford.
Fu—Fuller.

G-H-Goodyear-Hawley

type.

GM—General Motors

Corp., Detroit Diesel

Engine Div.

Her—Hercules. HS—Hall-Scott.

H8—Hall-Scott.
Int.—International
Harvester.
L—Lockheed.
LeR—LeRoi.
LH—Lockheed front,
Wagner "hi-Tork" rear.
LT—Lockheed type front
Timken rear.

Timken rear.

LW—Lockheed front,
Wisconsin rear.

M-Midland.
N.P.-New Process.
O or Ow-Own.
Op or Opt.-Optional.
Shu-Shuler.

Spi—Spicer.
Spi—Spicer.
T or Tim—TimkenDetroit Axle Co.
Tw—Timken-Detroit—
Westinghouse.
TW—Timken-Detroit—
Wissonsin

TW-

Wisconsin.
WG—Warner Gear.
Wau—Waukesha.
Wor Wis.—Wisconsin.
W-B—Wagner or Bendix.
WE—Wagner Electric.

Wg-Wagner "hi-Tork."
Ws-Westinghouse.

WW-Westinghouse or Wagner.

REAR AXLE

Final Drive and Type

inal Drive and Type
B—Bevel.
CB—Chain Drive.
F—Full-floating.
H or Hy—Hypoid.
d—Dual range axle.
2—Double Reduction.
S—Spiral bevel.
W—Worm.
4—Three Quarters
Floating.
14—Semi-Floating.

T-Torque Tube. FT-Full-floating, tandem drive.

GEAR RATIOS

(**)—Only one ratio.

Drive and Torque
H—Hotchkiss (springs)
R—Radius Rods.
L—Parallel Torque Rods.
T—Torque Arm.

GOVERNOR STANDARD

KEY TO REFERENCES

e.f.-Cab Forward design.

c.e.e.—Cab-Over-Engine design.

I.e.f.—Low cab forward design. (D) - Diesel-engine

equipped (T)—Designed for tractor use only.

(C)—Ford or Chevrolet Models.

-Remanufactured Fords. 4—Denotes "Includes Cab"
when used with
weights or prices.

CHEVROLET

- Overdrive available.
- -Powerglide available. Heavy duty three speed available.
- -Positraction axle available
- *—283 Super Turbo-Fire; 348 Turbo-Thrust; 348 Super Turbo-Thrust; 348 Turbo Thrust

CHEVROLET, cont'd.

Special or 348 Super Turbo Thrust Special available.

—348 Workmaster Special available.

Four speed close ratio available.

+-Turboglide available. **-283 Trademaster available

1-Heavy duty four speed available.

Five speed New Process available. Two speed rear axle available.

54—283 Super Taskmaster available.

e-Clark 267V available. ††-Spicer three speed auxilliary available.

DIVCO

*—Front only; rear, 7.50/ 165. †—Front only; rear, 7.50/ 208.

DIVCO, cont'd.

*—Front only; rear, 8.25/

Front only; rear, 7.50/ 20D.

DUPLEX

*Torque Divider, Timken T70-2 speed.

FARCO

*-With 2-speed transfer

-With 3-speed auxiliary and 2-speed transfer case.

FORD

*-Other options available.

FWD

Models available with tilt cabs.

KENWORTH

♦←Timken TK-500 PA Trailing Axle. ←Both C.O.E. and cab beside engine optional. AA—And 8031.

MARMON-HERRING-TON

*—Torque converter avail-able.

*—PM477HD and EDN534 engines avail-

t-14.00/20 front.

PETERBILT

**No standard wheel-bases. Shorter wheel-bases than figures shown are often pos-sible and vary with transmission, rear axles and fuel tanks. †—Wide variety of options available.

REO

-Model OA-145 and OA-

REO, cont'd. 142 LPG engines can

be furnished.

Two speed axle available.

able.

- Model OA-100 LPG or OA-130 engine can be furnished.

- OH-140 LPG or OH-185 engine can be furnished.

- OH-140 LPG or OH-185 engine can be furnished.

- Includes cab, fuel, oil, water.

Cummins HRFB, NH195, NH220, NTO, engines can be furnished.

mished.

"Model OV-235 or OV-220 LPG engine can be furnished."

"OH-170, OA-142 LPG or OH-185 engine can be furnished.

"OA-145 or OA-142 LPG, OH-160 LPG or OH-185 engine can be furnished.

"Rear only; front,

•—Rear only; front, 11.00/20.

WILLYS
*-Overdrive optional.

	WHEEL- BASE		TIRE	SIZES		ENGINE D	ETAII	LS			TRANSMISSIO	M		REAR A	LE	
MAKE		Weight		al rear gle rear												
AND MODEL	Minkmum Standard Maximum Standard	98	Chassis Weight See definition Standard Front and Rear	Maximum Authorized Tire Size (Duals unless	Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque Ib. ft.	Max. Brake H.P. at R.P.M. Given	Make and Model	Forward Speeds	Make and Model	Geer and Type	Drive and Torus	Gear Ratio
Chevrolet	119 119 119 119 119 119 119 115 127 127 128 129 129 127 127 127 127 127 127 127 127 127 127	4900 4900 4900 4900 5200 5200 5200 5200 5200 5200 5200 5	3740 8.00/145 3760 8.00/145 3760 8.00/145 3600 8.00/145 3600 8.00/145 3600 8.00/145 3200 8.00/145 3200 8.70/155 3200 8.70/155 3200 8.70/155 3200 8.10/17/155 3200 8.10/17/15/15/17/15/17/15/17/15/17/15/17/15/17/15/17/15/17/15/17/15/17/15/15/17/17/15/15/17/17/15/15/17/17/15/15/17/17/15/15/17/17/15/15/17/17/15/15/17/17/15/15/17/15/15/17/15/15/15/15/15/15/15/15/15/15/15/15/15/	8. 50 145 8. 50 145 8. 50 145 8. 50 145 8. 50 145 8. 50 145 8. 50 145 8. 50 145 8. 50 145 8. 717.56 8. 717	O-Hi. Thrift. O-Turbo-Fire* O-Hi. Thrift. O-Turbo-Fire* O-Hi. Thrift. O-Turbo-Fire* O-Th. Mas. So. O-Job Mas. O-Wk. Mas. So. O-Wk. Mas.	6-3 (x3) (x3) (x3) (x3) (x3) (x3) (x3) (x3	236 2263 2263 2262 2262 2262 2262 2262	8.5.2.3.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8	217 217 217 217 217 217 217 217 217 217	135 4000 170 4201 135 4000 135 4000 136 4000 137 4000 138 4000 138 4000 138 4000 150	Own * A	22222224444244444444444444444444444555555	Own	HISSON HE		3.88 3. 3.69 3.3 5.00 3.3 5.00 3.3 5.00 3.3 5.00 3.3 5.00 3.3 5.00 3.3 5.00 3.3 5.00 3.3 5.00 3.3 5.00 3.3 5.00 3.3 5.00 3.3 5.00 5.00
Reveland LA PBX LC LC	108 108	8000		********	Electric Electric Electric	Motor Motor Motor Motor						***	Dana 25 Dana 70 Dana 70	HF	IIII	
111 114 114 115 114 115 115 115 115 115	100% 100% 100% 100% 100% 100% 127% 127% 115 115 115	7500 7500 6000 6000 7300 7300 7600 12000 8000 7500 10600 7500 9500	2925 7.00 165* 2885 7.00 165* 2885 7.00 168 2880 7.00 168 2890 7.00 168 2990 7.00 168 2990 7.00 168 2990 7.00 168 2000 7.00 168 2000 7.00 168 3115 6.50 200 3112 7.00 168 3113 7.00 168 3143 7.50 168			4-3-5-x45-6 4-3-5-x45-6 4-3-5-x45-6 4-3-5-x45-6 4-3-5-x45-6 6-3-5-x45-6 6-3-5-x45-6 8-3-5-x45-6	162 162 162 162 162 230 230 230 230 162 230 162 230 162	6.2 6.1 6.2 6.6 6.6 6.6 6.6 6.6 8.2 8.2	173 173 173	55-290 47-260 56-290 47-280 88-290 76-280 76-280 55-290 75-280 55-290 55-290 55-290	0 WG 187 0 WG 787 0 WG 78 0 WG 79 0 WG 79 0 WG 79 0 WG 79 0 WG 79 0 WG 787 0 WG 787 0 WG 787			11111111111111111111111111111111111111		5.57-6 5.57-6 5.57-6 5.57-6 5.57-6 5.57-6 5.14-6 5.14-6 5.14-6 5.57-6 5.57-6 5.14-6 5.57-6 5.57-6 5.57-6

1960 TRUCK SPECIFICATIONS

Continued from page 307

	WHEEL- BASE			TIRE	SIZES		ENGINE D	ETA	ILS			TRANSMISSI	ON	RI	EAR A	(LE	
MAKE	BASE	cle Weight Service			al rear gle rear										1	8	
MODEL	Minimum Standard Maximum Standard		Chassis Weight (See definition)	Standard Front and Rear	Maximum Authorized Tire Size (Duals unless noted)	Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Make and Model	Forward Speeds	Make and Medel	Gear and Type	Drive and Torque	Gear Ratio Range in High
Divce Cont'd 42 53 54 44 77 77 55 44 45 56 77 77 77 77	1171-9 130 1171-9 1535-6 1525-8 1171-9 130 130 130 1171-9 1171-9 1171-9 1171-9 1171-9 1535-6 1535-6 1535-6	7000 7000 16500 16500 16500 7000 16500 7000 8600 7000 8600 7000 16500 7000 16500 7000 16500 7000 16500 7000 16500 7000 16500 7000 16500 7000 7000 7000 7000 7000 7000 7000	3281 4307 4277 4386 4059 3082	7.50/185 7.50/185 7.50/20° 7.50/20° 7.50/20° 7.50/20° 7.50/185 7.50/185 7.50/185 7.750/185 7.750/185 7.750/185 7.750/175 7.50/177		Own Super 6	6 31 x434 6 31 x434	253 253 253 253 253 253 253 253 253 253	7.5 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8	220 220 220 220 220 220 220 220 220 220	102 - 3400 102 - 3400	WG T88 WG T98 WG T98 WG T98 WG T98 WG T97 WG T97 WG T98		L150 L160 L160 L160 Int 160 Int 150 Spi 80 Int 150 Int 160	TITITITITITITITI		5.57-6. 5.57-6. 6.66-7. 6.66-7. 5.57-6. 6.68-7. 5.57-6. 5.57-6. 5.57-6. 5.57-6. 6.68-7. 5.57-6. 6.68-7. 6.68-7. 6.68-7.
Dedge . PS-D100 P8-D200 P8-D20	106 116 116 116 116 116 116 116 116 116	5100 7500 9000 15000 15000 19500 22000 25000 25000 25000 27000 29000 29000 30000 9000 9000 91500 15000 15000 15000 15000	2575 2800 2975 3125 4125 4555 4475 5525 5900 5825 6280 6800 7050 7050 7050 7050 7050 7050 7050 7	6.70 (158) 6.70 (158) 6.50 (168) 6.50 (168) 6.50 (168) 7 (17, 158) 7 (17, 158) 7 (17, 158) 7 (17, 158) 8 (22, 158) 8 (23, 158) 8 (24, 158)	8.50 1685 6.50 1685 6.50 1685 8.177.8 8177.8 9/22.5 10/22.8 11/22.5 10/22.8 11/22.5 11/22.5 11/22.5 11/22.5 11/22.5 11/22.5 11/22.5 11/22.5 11/22.5 11/22.5 11/22.5 11/22.5 11/20.7 11	Own	6 314 x 45 4 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	464 672 743 230 318 230 318 251 318 250 318	8.3 7.9 8.3 7.1 8.3 7.1 8.3 7.1 8.3 7.1 14.9 15.1 16.1 17.1 16.1 16.1 16.1 16.1 16.1 16	286 216 216 216 216 216 216 216 216 216 21	200 390f 120 3800 200 3900 120 3800 125 380 202 3900 125 380 202 3900 194 350 202 3900 194 350 204 390 207 390 178 550 208 390 178 550 208 390 209 390 178 250 208 390 209 300 209 300 209 300 209 300 209 300 209 300 200 300	WG T88E OF 220 NF 420	33333444444455555555555555555555555555	Own D1 Spi 60 Spi 60 Own D3 Own D3 Own D4 Own D4 Tim F147 Eat 1614 Tim F147 Eat 1614 Tim F147 Eat 1790A Tim GT140 Tim RT140 Tim RT140 Own P3 Own P4 Own P4 Own S4 Tim F147 Tim F147 Tim P147 Tim T140 Tim T147 Tim T140 Tim T147 Tim T147	Hy Hy Hy Hy Hy Hy Hy Hy Hy Hy Hy Hy Hy H	TITILITITITITITITITITITITITI	4, 10-4, 4, 10-4, 4, 10-4, 4, 10-4, 4, 10-4, 5, 62-6, 6, 20-6, 6,
Duplex T-30 R-42 R-45 KK K-50 L-660 (D) LC-60	7 136 220 0 136 220 1 148 220 1 148 220	23000 30000 30000 34000 34000 37000 37000	*8820 *8850 *10500 *10500 *11300 *11650	8.25/20 9.00/20 9.00/20 11.00/20 11.00/20 11.00/20 11.00/20 11.00/20	9.00/20 11.00/20 11.00/20 12.00/20 12.00/20 12.00/20 12.00/20 12.00/20	Int BD306 Con B6427 Int RD450 Her RXC Int RD501 Her RXLD Con R6602 Cum HRB600	8-3-2 x41/2 6-4-2 x5/3 6-45-x51/4 6-41-x51/4 6-41-x51/4 6-41-x51/4 6-51-x6	306 427 456 525 501 556 602	6.5 6.6 6.5 6.6 6.6	3 273 3 325 3 388 1 395 4 44 4 430 1 465	141-250 182-300 132-230 212-300 154-240 200-260	0 Fu 5B330 0 Fu 5A43 0 Fu 5A43 0 Fu 5A620 0 Fu 5A620 0 Fu 5C650 0 Fu 5C650	5555555	Tim QT340 Tim QT340 Tim U200 Tim U200 Tim U200 Tim U200	B Fd Fd 2F 2F 2F 2F 2F	HRRRRRR	6.42-8 6.42-8 6.42-8
Ford Courie F-10 F-100-4s F-200-4s F-200-4s F-200-4s F-200-4s F-300-6s F-30	r 119 111 111 111 111 111 111 111 111 11	3 5000 5	2996 236 336 346 347 347 436 478 691 787 697 697 787 697 787	8.00/14S 8.70/15S 6.70/15S 6.60/16S 9.60/16S 9.60/16S 9.61/15S 9.722.5D	8.00/14 7/17.5 6/19.5 6/19.5 8/19.5 8/19.5 10/22.5 11/22.5 12/22.5	Ford EBP* Ford EBR* Ford ECS* Ford ECS* Ford ECS* Ford ECJ* Ford EDM* Ford E	6 3.62×3.66 6 3.62	0 22: 0 23: 0 23: 0 24: 0 24: 0 24: 0 25: 0 25: 0 26: 0 27: 0	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	1 200 1 203 1 203 1 203 1 203 1 203 1 203 1 203 1 203 1 203 2 31 1 203 2 31 1 203 2 31 2 31 3 4 4 2 5 5 5 3 4 5 4 5 5 5 3 4 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	138 - 4202 139 - 4202 124 - 4002 220 - 366 220 -	0 Ford* 0 Ford* 0 Ford* 0 Ford* 0 Ford* 0 WG-T98A* 0 WG-T98A* 0 WG-T98A* 0 Cla 250V* 0 Spi 5652* 0 Spi 5652* 0 WG-T98A* 0 Cla 250V* 0 Spi 5652*		Ford 3300° Spi 60° Spi 60° Tim B-140 Tim C-100° Tim F-106° Eat 1814° Eat 1790° Eat 1892° Eat 1911° Tim U-200° Eat 1840°	インスペート・アー・アー・アー・アー・アー・アー・アー・アー・アー・アー・アー・アー・アー・		3.89-4.88-5.14-6.62-6.8-6.7.17-7.17-6.55-6.62-6.57.17-7.17-6.50-6.67-7.17-6.50-6.67-7.17-6.50-6.67-7.17-6.50-6.67-7.17-6.50-6.67-7.17-6.50-6.67-7.17-6.50-6.67-7.17-6.50-6.67-6.67-6.67-6.67-6.67-6.67-6.67-6.6

For references and abbreviations see page 306

Continued on page 310



You invested

in the best ...

KEEP IT THE BESTWITH MACK PARTS

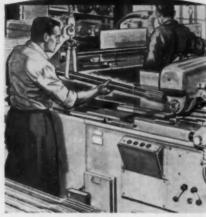
Whether you have just purchased a Mack... or if you have been operating one for hundreds of thousands of miles, there is only one sure way of retaining the original Mack quality you invested in.

That is to use genuine Mack quality replacement parts. It makes sense that if Mack made the original part, it knows best how to make a replacement part that will provide the same

fine, long service life as the original.

Mack knows best because it makes replacement parts on the same production lines as the originals and to the same high standards of Mack Balanced Design . . . they are, in fact, identical in every respect to the original equipment.

Protect your investment in Mack quality by specifying Mack quality replacement parts. They're available



from a coast-to-coast network of sales outlets. Mack Trucks, Inc., Plainfield, New Jersey. Mack Trucks of Canada, Ltd., Toronto, Ontario.

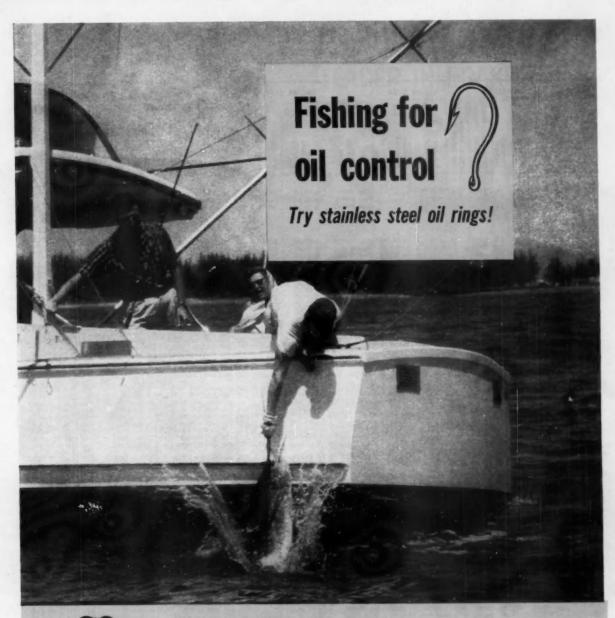
7090

MACK
FIRST NAME FOR
TRUCKS

1960 TRUCK SPECIFICATIONS

Continued from page 308

	WHEEL- BASE			TIRE	SIZES		ENGINE D	ETA	ILS			TRANSMISS	ON	RE	AR A)	LE	
MAKE		Weight			al rear igie rear								1				
AND MODEL	Minimum Standard Maximum Standard	98	Chassis Weight (See definition)	Standard Front and Rear	Maximum Authorized Tire Size (Duals unless noted)	Make and Mndel	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Make and Model	Forward Speeds	Make and Model	Gear and Type	Drive and Torque	Gear Ratio Range in High
ord-Cont'd P-400 P-500	137 137 137 154		2515 3315	8/17.5S 8/19.5S	8/19.5 8/22.5	Ford EBT*	6-3.62x3.60 6-3.62x3.60	223 223	8.1 8.1	203 203		WG-T89C* WG-T87E*	3	Spi 8-140 Tim C-100°	HF	н	5.14-° 6.2 -°
(D) 4985 (D) 4922 (D) 4923 (D) 4924 (D) 4925 4925 (D) 5825 (D) 5846 (D) 848	1531/4 255 1531/4 255 191 255 190 255	33000 43000 47000 61000 60000 48000 42000 47000 54000 65000	12700 12765 11800 10500 13800 13865 16200 1640C 13830 12500 12565 22500 21441	10.00/20 10.00/20	11,00,'22 11,09,'22 11,00,'22 11,00,'22 11,00,'22 11,00,'22 11,00,'22 11,00,'22 11,00,'22 11,00,'22 11,00,'24 14,00,'24 14,00,'24	Cum JTB Cum JTB Cum JTB Cum NH220 H.S. 590GV3 Cum NH220	6-41/x25 6-41/x25 8-41/x25 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26 8-51/x26	401 743 590 743 743 743 743 743 590 590 743 743		350 535 490 535 535 535 535 490 490 535 535	220-2100 220-2100 220-2100 220-2100 220-2100 232-2800	5A65^4 5A65^4 8241^4 Fu 5C72^4 8241^4 8241^4 8241^4 8241^4 Fu 5C72^4 Fu 5C72^4 8241^4 8241^4 8241^4	15 15 15 15 15 15 15 15 15 15 15 15 15 1	Tim R200 Tim R2004 Tim SQHD Tim R200 Tim R200 Tim R200 Tim R200 Tim R200 Tim R200 Tim SQHD Tim SPD4840 Tim SFD4840	H2F H2F H2F H2F WF WF B2F H2F WF B2F B2F	HHLLL HLLL	5.91-9. 5.91-9. 5.91-9. 5.67-8. 4.72-8. 5.78-9. 5.91-9. 5.67-8. 8.07-1.
armon-Herr. (Bus Chassis) 4C (Bus Chassis) 8C (Bus Chassis) 5C	178 A	24000 24000 24000	7965	9.00/20D 9.00/20D 9.00/20D	10.00/20 10.00/20 10.00/20	Ford ECT® Ford ECT®	8-3+1x3+1 8-3+1x3+1 8-3+1x3+1	332 332 332	7.6 7.6 7.6	328 328 326	212-3800	A .	5 5 5		HF HF	H	6.8 -7 6.8 -7 6.8 -7
terhilt (D)	165° Opt 165° Opt	33000 33000	*10900 *10800	Ont Opt	11.00/22 11.00/22	Cum NH2208 Cum NH2208	6-51/4x6 6-53/4x8		15.5 15.5	606 606	220-2100 220-2100	Spi 8041† Spi 8041†	12 12	Tim R230† Tim R230†	H2F H2F	H	4.41-7 4.41-7
60 C-200 C-201 C-202 C-2	134 130 181 13	\$ 18800 1880	**************************************	8.22.5 8.22.5 8.22.5 8.22.5 8.22.5 8.22.5 10,22.5 10,22.5 10,22.5 10,22.5 10,22.5 10,22.5 10,22.5 10,22.5 10,22.5 10,22.5 11,22.5	10/22.5 10/22.5 10/22.5 10/22.5 11/22.5 11/22.5 11/22.5 11/22.5 11/22.5 11/24.5	Own OA1102 Own OA1102 Own OA1102 Own OA1102 Own OA1102 Own OA1102 Own OA1304 Own OA1304 Own OA1304 Own OA1304 Own OA1304 Own OA1304 Own OA1451 Own OA150 Own OA170# Own OA170# Own OA170# Own OA170# Own OA207 Own OY207 Own OX100 Own OA110 Own OA130 Own OA130 Own OA130 Own OA130 Own OA135 Own OA145	6-35 gard;	331 331 331 390 390 390 390 390 390 672 672 672 672 390 255 255 255 252 292 292 293 333 333 333 339 390 390 390 390 390 3	6.77.66.996.6.97.77.56.97.77.7.56.99.97.77.33.6.99.97.77.33.6.6.97.77.7.56.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.77.33.6.99.97.97.77.33.6.99.97.97.77.33.6.99.97.97.77.33.6.99.97.97.97.97.97.97.97.97.97.97.97.97.	194 194 194 194 194 194 194 194 194 194	110 - 3400 110 - 3400 110 - 3400 110 - 3400 110 - 3400 130 - 3300 130 - 3300 130 - 3300 130 - 3300 146 - 3200 146 - 3200 146 - 3200 146 - 3200 146 - 3200 146 - 3200 146 - 3200 146 - 3200 146 - 3200 1470 - 3400 170 - 3400 170 - 3400 207 - 3400	WG T98A WG T98A WG T98A WG T98A WG T98A Gla 250V Spi 3152 Fu SA65 Spi 6453A Spi 6453A	444455555555555555555555555555555555555	Tim F1404 Tim H1404 Tim H340 Tim H340 Tim L1404 Tim L1404 Tim L1404 Tim L1404 Tim L340 Tim L340 Tim L340 Tim C71404 Tim T71404	######################################		0.00-
5E1 5E1 5E1 5E1 5E1 5E1 5E1 5E1 5E1 5E2 5E40 5E40	112 12 112 12 112 12 112 13 1 131 13 1 131 13 1 131 13 1 131 13	22 520 22 520 22 700 22 700 21 900 21 900 21 1800 21 1800 21 1800	0 269 0 277 0 291 0 299 0 314 0 305 0 363 0 373	0 7.10/158 0 7.10/158 0 7.10/158 0 7.00/168 5 7.00/168 5 7.00/168 0 8/17.58 0 8/17.58 5 8/19.58 0 8/19.58 0 8/25/20	8.50/165 8.50/165 8/17.55 8/17.5 8/17.5 8/17.5 10/22.5 10/22.5 10.00/20 10.00/20	Own 4E Own 3E Own 4E Own 3E Own 3E Own 4E Own 4E Own 4E Own 6E	6-374 x43/ 8-374 x31/ 6-374 x31/ 8-374 x31/ 8-374 x31/ 6-374 x43/ 8-374 x31/ 8-374 x35/ 8-374 x35/ 8-374 x35/	25 25 24 24 24 25	7.8 9 7.8 5 7.8 9 7.8	5 196 5 225 5 196 5 225 5 196 5 196 5 225	94-320 150-380 94-320 150-380 150-380 94-320 150-380 162-390	0 WG T908 0 WG T908 0 WG T89C 0 WG T908 0 WG T98A 0 WG T98A 0 WG T98A 0 WG T98A 0 WG T98A	200000444444	Spi 2211 Spi 2211 Spi 00 Spi 00 Tim B140 Tim B140 Tim E102 Tim E102	H H H H H H H H H H H H H H H H H H H	***	4.27 3.73 3.73 4.10 4.10 4.86 5.14 5.29 5.29 6.20 6.20
/ard-La France 488R-1 500R-1 600R-1	145 15 145 15		0 1040	2 16.00/20 0 11.00/22 0 11.00/22	*******		6-4-4x43/6 6-41-5x53/4 6-43/x53/6	42	7 6.4 1 6.1 2 6.2	380	170-300 178-260	0 Ful 5A43 0 Ful 5A62 0 Ful 5C72		Tim QT-140	H H 2H	RRR	** :





Stainless: tee oil ring U.S. Pat. No.

.. install American Hammered KROME-OIL piston ring sets with stainless steel oil rings

American Hammered's stainless steel oil ring controls oil better, even in tapered and out-of-round bores, than rings made from ordinary steel. You'll find it superior for these five reasons—needs no back-up spring or shim stock • resists sludging and corroding • maintains tension under extreme heat • fast break-in • easy to install. Positively controls oil . . . stops oil pumping and smoking.

AMERICAN HAMMERED

Automotive Replacement Division • Muskegon, Michigan

A Division of Sealed Power Corporation



1960 TRUCK SPECIFICATIONS

Continued from page 310

	WHE				TIRE	SIZES		ENGINE D	ETA	ILS			TRANSMISSI	ION	R	EAR A	OLE.	
MAKE	-	-	Weight			al rear gle rear		1								T		
AND MODEL	Minimum Standard	Maximum Standard	8%	Chassis Weight (See definition)	Standard Front and Rear	Maximum Authorized Tire Size (Duals unless noted)	Make and Medel	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Make and Model	Forward Speeds	Make and Model	Gear and Type	Drive and Torque	Gear Ratio Range in High
Ward-La Fr.—Cont'd (D)400R-D-1 (D)500R-D-1 (D)700R-D-1	145 145 145		34000	11570	10.00/20 11.00/22 11.00/22	*********	Cum JBS Cum HRFB Cum NH220	6-41-6x5 6-51-6x6 6-53-6x8	743	15.5	375 580 606	190-2000	Ful SA85 Ful SC72 Ful SW74	555	Tim QT-140 Tim R-140 Tim U-200	H H 2H	RRR	** -6.8 ** -6.8 ** -7.2
Four-Wheel Drive																		
Celeman (D) D8SRECP2A (D) D8SRECP2C (D) D8SRECP4C (D) D8SRECP4C (D) D8SRECP4C (D) D8SRECC2C (D) D8SRECC4C	135 136 135 135 135 135 135 135 135 135 135 135	145 145 145 145 145 145 145 145 145 145	50000 40000 50000 50000 40000 40000 50000 50000 40000 50000 40000 50000 40000		14.00/20S 14.00/20S	14.00/20\$ 14.00/20\$	Cum NH220 Wasi 145GKB	6-63-6 x 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	743 743 743 743 743 743 743 672 779 779 779 779 779 779 779 779 779	15.5 15.5 15.5 15.5 15.5 15.5 15.5 6.2 6.2 6.2 6.2	606 606 606 606 606 535 590 590 590 590 590 590 492	220-2100 220-2100 220-2100 220-2100 220-2100 220-2100 220-2100 238-2400 238-2400 238-2400 238-2400 238-2400 238-2400 238-2400 238-2400 238-2400	All TG602 Cla 610ED All TG602 Cla 610ED All TG602 Cla 610ED All TG602 Cla 610ED Fu R63 Spi 6352	939393939393939	Own 17HD Own 17HD Own 817 Own 817 Own 817 Own 17HD Own 17HD Own 817 Own 817 Own 817 Own 817 Own 817 Own 17HD This 17HD Own 17HD	222222222222222222222		
Dedge Pe-W100 Pe-W200 Pe-W200 Pe-W200 Pe-W300 Pe-W300 Pe-W300 Pe-W300 Pe-W300 Pe-W300 Pe-W300	108 108 116 116 126 129 129 156 156	116 116 116 116 126 129 129 174	6000 6000 8000 9500 10000 10000 20000	3275 3425 3475 3625 4600 4050 4200 5300	7/17.55 7/17.55 7/17.55 7/17.55 7.50/168 7.00/16 7.00/16 8/22.5 8/22.5	7/17.5S 7/17.5S 8/19.5S 8/19.5S 9.00/16S 7.50/16 9/22.5 9/22.5	Own Own Own Own Own Own Own Own Own	6-31-4 x45-6 8-35-3 x3-8 6-31-4 x45-6 6-31-4 x45-6 8-35-3 x45-6 8-37-x45-6 8-37-x45-6 8-37-x45-6	230 318 230 318 230 318 250 265	7.9 8.3 7.9 8.3 7.9 7.9	202 286 202 286 198 288 216 228	120-3600 200-3900 120-3600 200-3600 102-3600 202-3600 125-3600 130-3600	WG T87E WG T87E WG T87E WG T87E NP 420 NP 420 NP 420 NP 420	33334444444	Spi 60 Spi 60 Own W3 Own W3 Own W3M Spi 70	Hy Hy Hy Hy Hy Hy	HHHHH	4.1 -4. 4.1 -4. 4.1 -4. 4.80-5. 4.88-5. 4.88-5. -6.
Duplex L-8802-4 (D) LC-600-4	148 148		40000 40000	^13300 ^14550	11.00/20 11.00/20	12.00/20 12.00/20	Con R6602 Cum HRB600	6-47/4x53/4 6-51/4x6	802 743	6.1 16.0	465 540		Fu 5C650 Fu 5C650	5	Tim 1758 Tim 1758	2F 2F	H	** -8. ** -8.
fabee (c)FD2018 (c)FD2018 (c)FD2518 (c)FD3028	130 130 130 132	172 172	19000 27000	5700 7500	7.50/20 7.50/20 8.25/20 10/22.5	8.28/20 8.25/20 9.00/20 11/22.5	Ford Ford Ford Ford	8-3.8x3.1 8-3.8x3.1 8-3.8x3.5 6-3.8x3.6	256 317	7.8 7.8 7.2 7.8	228 286	140-3900 170-3900	Ford°	10	Ford Ford Ford Eat 1790	HF SF SF	TITI	7.17-7.
Ford F-100 (4x4)	118 118 118 118	118	5600 7400	3495 3600	6.70/15S 6.70/15S 6.50/16S 6.50/16S	7/17.5\$ 7/17.5\$ 8/19.5\$ 8/19.5\$	Ford EBR Ford EEH Ford EBR Ford EEH	6-3%x3}} 8-3%x3}} 6-3%x3}} 8-3%x3}	223 292 223 292	8.3 7.9 8.3 7.9	269	139-4200	Ford°	3 3 3	Ford 3300 Ford 3300 Spi 60 Spi 60	H1/2 H1/2 HF	TITI	** -3. ** -3. ** -4.
FWD 170 191 191 192 (D) 286 (D) 2330 (D) 2330 (D) 2340 (D) 286 (D) 286 (D) 3840 (D) 387 (D) 3880 (D) 4080 (D) 4080 (D) 4080 (D) 4080	142 142 142 142 142 143 143 144 144 144 144	215 215 202 231 202 202 202 202 202 202 203 2 231 2 231 2 231 2 211 2 211	20000 20000 22000 32000 23000 23000 28000 28000 28000 32000 32000 36000 40000 40000	7620 7680 8890 11990 8850 9800 8860 9750 11405 12930 13900 13900 13970 14630 14800	7.50/20D 8.25/20D 8.25/20D 8.25/20D 8.25/20D 11.00/20D 11.00/20D 9.00/20D 10.00/20D 10.00/20D 11.00/20D	14.00/20S 14.00/20S 14.00/20S	Int BD240 Int BD284 Int BD284 Int BD308 Int RD450 Cum JT68 Int BD308 GM 3-71 Int RD302 GM 4-71 Int RD302 GM 4-71 Int RD406 Cum JT68 Int RD501 Cum HR68 Int RD501 Cum HR68 Int RD501 Cum HR68 Int RD501 Cum HR68 GM 6-71 Cum HR68 GM 6-71 Cum HR782 Was 145GKR GM 6-71 Cum NH220 Int RD501	8-3 (1 x 4) x 8-3 (1	241 264 306 451 401 308 213 372 284 406 401 451 286 743 801 777 777 421 743	7.8 7.5 6.5 16.3 6.5 16.0 6.8 17.0 6.5 16.3 6.5 17.0 15.8	224 248 288 388 407 286 375 338 407 338 375 550 444 580 595 595 697 697	141-380(153-300) 154-380(154-380) 154-380(157-320) 154-380(156-320) 178-320(178-320) 178-320(178-320) 178-320(178-320) 122-300 150-230(178-300) 150-230(178-300) 212-300(240-240) 222-225-225	WG T9	4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Own 23L Own 23L Own 23L Own 23L Own 23 Own 23 Own 23 Own 23 Own 23 Own 23 Own 33A Own 33A Own 33A Own 33A Own 33 Own 34 Own 34 O	SF S		4.86-8. 4.86-8. 4.86-8. 4.18-12. 4.86-8. 4.86-8. 4.86-8. 4.86-8. 4.86-8.
Marmon-Herr	130 131 131 131 131 132 133 133 134 134 134 134 134 134 134	0 154 0 154 0 192 0 192 0 192 2 192 2 192 2 192 2 193 5 153 5 153 5 153 5 153 5 153 5 153	17000 17000 221000 221000 221000 221000 222500 225000 225000 22500 22500 22500 22500 22500 22500 22500 22500 22500 22500 2250000 225	*5081	7/22.50 7/22.50 7/22.50 8/22.50 8/22.50 8/22.50 9/22.5	8/22.5 8/22.5 8/22.5 10/22.5 10/22.5 10/22.5 10/22.5 10/22.5 10/22.5 11/22.5 10/22.5 10/22.5 10/22.5 10/22.5 10/22.5 10/22.5 10/22.5 10/22.5 11/22.5 11/22.5 11/22.5 12/22.5	Ford Ford Ford Ford Ford Ford Ford Ford	6 35 6 x 3 12 8 3 6 x 3 7 7 7 8 8 3 6 x 3 6 x 3 7 7 7 8 8 3 6 x 3 7 7 7 8 8 3 7 7 8 8 3 7 7 8 8 3 7 7 8 7 8	292 293 293 293 303 303 40 293 303 303 40 40 40 40	7.62 7.62 7.62 7.62 7.62 7.62 7.62 7.62	270 270 270 270 270 270 270 270	172-400 100-400 1100-400 1100-400 172-400 180-400 172-400 180-400 194-380 205-380 220-380 220-380 220-380 220-380 220-380	0 Wer T98A 0 Wer T98A 1 Wer T98A 1 Wer T98A 1 Wer T98A 0 Wer T98A 0 Wer T98A 0 Wer T98A 0 Wer T98A 0 Cla 250V 0 Spi 5652 0 Spi 5652	4400000	Tim D100 Tim F106 Tim F106 Tim F106 Eat 1614 Eat 1614 Eat 1790A Eat 1790A Eat 1614 Eat 1614 Eat 1614 Eat 1790A Eat 1790A	***************************************		** -5. ** -6. ** -6. ** -6. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7. ** -7.



LEADER IN BRAKE RESEARCH AND TESTING"

BENDIX MOBILE LABORATORY prepares to take to the highway in the interests of better braking and greater highway safety. Aboard is every scientific instrument needed to measure brake design and performance from every possible angle.

To add even more depth to its research and testing of brakes and power brakes, Bendix Products Division now operates a unique mobile laboratory to gather the most complete braking data ever assembled.

Equipped with the latest in scientific brake test instruments, the Bendix Mobile Laboratory will travel more than 100,000 miles per year making tests under all kinds of driving conditions, over all kinds of roads. It will thoroughly "road check" new brake designs and developments in weather ranging from 30° below zero in Minnesota to 110° in the Arizona desert.

A permanent record of each test run is being maintained for complete study and analysis. Special instruments aboard measure such factors as: speed and stopping distance; temperatures of lining, drums, wheel rims, and hydraulic fluid; speed of brake applications and time lag between trailer and tractor brakes; stroke of master and wheel cylinders; and pressure and displacement input to brakes.

No one else in the world does as much brake research and development work as Bendix—"Brake Headquarters of the World." Why not put this experience to work for you!



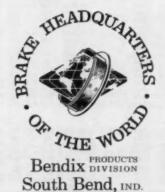
TEST RESULTS for each run can be checked visually by Bendix engineers during stops and are also recorded permanently on 25-channel oscillograph for detailed study later. Two-way radio (right) permits conversation with tractor driver and with South Bend headquarters.



CAB OF TRACTOR in tractor-trailer combination carries supplementary instrumentation to that in trailer, so that driver can maintain complete control in line with test stop instructions given by engineers in trailer.



PART OF LARGE FLEET ul Bendix brake test vehicles operated by Bendix Automotive Engineering, Research, Development and Road Test Departments. Much of work is done in mountainous country. Bendix also maintains large test facility at Jennerstown, Pa.





MOBILE LABORATORY NO. 2 is also used to test brakes and power brakes in all kinds of weather over all kinds of terrain. Trailer interior houses battery of instruments for checking and recording results of test runs.



1960 TRUCK SPECIFICATIONS

Continued from page 312

	WHEEL- BASE				TIRE	SIZES		ENGINE D	ETAI	LS		TRANSMISSI	NC	REAR AXLE				
MAKE			Weight		D-dual rear S-single rear												9	
MODEL	Minimum Standard Maximum		Gross Vehicle V for Normal Serv	Chassis Weight (See definition)	Standard Front and Rear	Maximum Authorized Tire Size (Duals unless noted)	Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Make and Model	Forward Speeds	Make and Model	Geer and Type	Drive and Torque	Gear Ratio Range in High
our-Wheel Drive— whitesh W-216 W-216 W-216 W-316 D W-316-D W-416 D) W-516-D D W	152 150 150 150 152 152 150 152 150 152 150 152 152 150 152 150		23600 24000 28000 30000 30000 32000 32000 32000 32000 32000 32000 32000 36000 36000 400000 400000 400000 400000 400000 400000 400000 4000000	9025 90310 9	10 72.5 10 72.5 11 72.5 12 72.5 11 72.5 11 72.5 12 72.5 13 72.5 13 72.5 14 72.5 15 72.5 16 72.5 17 72.5 17 72.5 18		Int RD406 Cum JM6B Con T6427 Int RD406 Cum JT6B Cum JT6B Cum JT6B Int RD450 Int RD450 Int RD501 Con R8513 Int RD501 Int RD501 Int RD501 Con R8572 Con R8602 Con R8602 Con R8602 Cum H6B Cum HR76B	6-45-6x41 6-46-6x45 6-46-6x56 6-46-6	406 427 427 406 401 450 501 513 501 572 672 672 672 672 672 403 743 7743 7743 1091 1091 743 1		338 342: 328: 338: 342: 338: 444: 444: 444: 464: 484: 451: 580: 580: 606: 865: 606: 865: 427: 427: 388: 388: 388: 388: 427: 427: 580: 606: 606: 606: 606: 606: 606: 606: 6	170, 300(137, 280(175, 320(175	Own MT216 Own MT214 Own MT314 Own MT316 Own MT317 Own MT316 Own MT316 Own MT317 Own MT316 Own MT317 Own MT316 Own MT317 Own MT316 Own MT316 Own MT317 Own MT316 Own MT316 Own MT317 Own MT316 Own MT316 Own MT316 Own MT3206 Own MT3201	55855555555555555555555555555555555555	Own R50 Own R55 Own R55 Own R2100 Own R2208M Own R2209M Own R2500 Own R2500	\$		
urlebaker 4E6D 4E7D 4E11D 4E12D 5E13D 5E14D	112 112 131	122 122	5490 5400 7400 7400 9400 9400	2875 2985 3070 3635	6.00/16S 57.10/15S 57.00/16S 7.00/16S 57.00/17S 7.00/17S	6.50/16S 6.50/16S 7.50/17S 7.50/17S 7.50/16 7.50/16	Own 4E Own 3E Own 4E Own 3E Own 3E Own 4E	6-3-4x434 8-3-2x314 6-3-2x434 8-3-2x314 6-3-2x434	259 245 259 259	7.5	225 196 225 225 225	150-380 94-320 150-380 150-380	0 WG T98A 0 WG T98A 0 WG T98A 0 WG T98A 0 WG T98A 0 WG T98A	4 4 4 4 4	Spi 2211 Spi 60 Spi 60 Tim B140	H34 HF HF HF HF		** 1
alter (c.f.)	126 138 138	150 150 162 162 162 150	24000 36000 36000 42000 32000	13000 14000 15000	12.00/20S 12.00/24S 12.00/24S 12.00/24D 11.00/24D		Wau 145GKB Wau 145GKB	8-434x5 6-458x532 6-534x6 6-534x6 8-432x433	554 779 779		2 440 2 585 2 585	165-225 240-240 240-240	O Own FJN O Own FC O Own FA O Own FA O Own FC	6666	Own FCR	2 2 2 2 2	HHHHH	** -
Vard-La Fr. 400R-53 500R-83 000R-83 400R-44 500R-44 (D) 400R-D-83 (D) 500R-D-83 (D) 700R-D-44 (D) 500R-D-44 (D) 700R-D-83	145 145 145 145 145 145 145 145 145 145	193 193 193 193 193 193 193 193 193 193	42000 49000 50000 28000 34000 40000 49000 60000 29000 34000 40000	13456 15152 11132 11616 12662 11697 14456 17396 11202 12776	0 10.00/20 0 11.00/22 2 11.00/22 2 10.00/20 11.00/22 2 11.00/22 2 11.00/22 2 11.00/22 0 11.00/22 2 10.00/20 0 11.00/22 0 11.00/22		Con T8427 Con U8501 Con R8602 Con T8427 Con U5501 Con R8602 Cum JBS Cum HRFB Cum JBS	6-4-4 x47-6 6-4-5 x53-6 6-4-7 x53-6 6-4-7 x53-6 6-4-7 x53-6 6-3-6 x6 6-5-6 x6 6-5-6 x6 6-5-6 x6 6-5-6 x6	501 602 427 501 602 401 743 743 401 743	6.1 6.2 13.0 15.1 15.1 13.0	1 412 484 1 350 1 412 2 484 0 375 5 580 5 606 0 375 5 580	2 178-260 232-280 170-300 2 178-260 2 232-280 3 160-250 3 220-210 3 160-250 190-200	0 Ful 5A43 0 Ful 5A62 0 Ful 5C72 0 Ful 5A43 0 Ful 5A62 0 Ful 5A62 0 Ful 5C72 0 Ful 5C72 0 Ful 5W74 0 Ful 5A65 0 Ful 5C72 0 Ful 5W74	900000000000000000000000000000000000000	Tim SQDD Tim SFDD Tim QT140 Tim R140 Tim U200 Tim SLHD Tim SQDD Tim SFD4600 Tim QT140 Tim R140	H H 2H H 2H H 2H H H 2H H	LLLRRRLLLRRR	00 -
Willys F4-134-6x/ F4-134-6x/ F4-134-4w/C L6-226-4x/ L6-226-4x/ CJ-1 CJ-1 CJ-1 DJ-3/ FC-17/ DJ-6/ FC-17/ FC-17/	2 104 1-2 1 118 1 104 1-2 2 104 1-2 2 104 1-2 3 80 A 8 101 8 101 A 80 A 103 5-6 A 102 7-6 0 103 5-6	104 118 104 118 80 118 80 118 81 101 81 103 1103 11	4500 4500 4500 4500 4500 3500 3750 3800 5000 7000 8000 9000	0 170 0 2010 0 196 0 1814 0 212 0 172 0 175 0 180 0 135 0 208 0 216 0 140	0 7.00/15\$ 1 6.70/15\$ 3 7.00/16\$ 3 7.00/15\$ 4 6.70/15\$ 7 7.00/16\$ 5 6.00/16\$ 6 6.00/16\$ 6 6.00/16\$ 7 7.00/15\$ 8 7.00/15\$ 8 7.00/16\$ 1 6.70/15\$ 8 7.00/16\$ 5 7.00/16\$	7.50/16S 7.50/16S 7.50/16S 7.50/16S 7.50/16S 7.50/16S 7.00/16S 7.00/16S 7.00/16S 7.00/16S 7.00/16S 7.00/16S 7.00/16S 7.00/16S 7.00/16S	Own Own Own Own Own Own Own Own Own Own	4 31 6 x 43 6 4 33 6 x 43 6 6 3 6 x 43 6 6 3 6 x 43 6 6 3 6 x 43 6 4 3 6 x 43 6 6 3 6 x 43 6	134 134 226 226 226 134 134 134 221 134 221	7 6	9 114 9 190 9 190 9 190 9 114 9 114 5 103 9 114 5 103 9 190	75-400 72-400 105-360 105-360 105-360 72-400 72-400 72-400 105-360 105-360 105-360	0 WG 790C 0 WG 790C 0 WG 790C 0 WG 790C 0 WG 790J 0 WG 790J 0 WG 790C 0 WG 790C 0 WG 790C 0 WG 790A 0 WG 790A 0 WG 790A 0 WG 790A 0 WG 790A 0 WG 790A	20 22 23 23 23 24 24 25 24 25 25 25 25 25	Spi 53-2 Spi 44 Spi 44 Spi 53 Spi 44-2 Spi 44-2 Spi 44-2 Spi 44-1 Spi 43-1 Spi 43-1 Spi 53	HI COCCUPATION OF THE HILL HILL HILL HILL HILL HILL HILL HI	TITITITITITITI	4.27- 4.27- 4.27- 4.27- 5.38- 4.27-
Dodge	0 134 0 134 0 134 G 134 0 134 0 146	212 212 212 200 200 200 200 200	45000 53000 45000 50000 53000 49000	0 965 0 1117 0 1167 0 1177 0 1255 0 1242	0 9/22.5 0 9.00/20 5 10.00/20 5 9.00/20 5 8.25/20 0 10.00/20 5 9.00/20 0 10.00/29	10/22.5 11.00/20 12.00/20 11.00/20 12.00/20 12.00/20 12.00/20 12.00/20	Own Own Own Cum Cum Cum Cum	8-41-x33-x 8-41-x33-x 8-41-x33-x 6-41-x6 6-41-x6 6-41-x6 8-51-x6	366 413 466 673 466 873	0 7. 3 7. 4 14. 2 15. 4 14. 2 15.	5 37	5 204 356 3 217 356 6 175 256 4 180 216 6 175 256 4 180 216	10 NP 541 10 NP 541 10 Cln 301V 10 Cln 301V 10 Cln 301V 10 Cln 301V 10 Spi 6452A 10 Spi 6452A		Tim 30DS Tim SQHD Tim 30DS Tim 30DS	Hy Hy Hy Hy Hy Hy	TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	6.50- 6.83- 4.88- 4.88- 4.11- 4.11-

NEW the seat that gives greater comfort at lower cost!

American unison-action seat

Patents #2602487 and #2925120-Other patents pending

FULL-FLOATING BACK

Contoured back rest moves up and down in unison with seat springs, eliminating shirt-tail rub and back scrub.

PASSENGER CAR COMFORT

is assured through heavy padding—
1" of foam rubber over 1" of cotton covers the specially engineered springs.

PADDING

1" of rubberized hair, plus foam rubber, over zigzag springs create a perfect contour and absorb kidney punch.

BACK ADJUSTMENT

Three back adjust-ments, with finger-tip control, assure perfect driving position.

EASY-SLIDE TRACKS

Entire seat moves forward and back 4" on easy-slide seat tracks.

PEDESTAL

Some models available with pedestal that adjusts up and down.

AIR CUSHION CONTROL

Air valve adjusts to give flexibility against rebound for any road condition or driver's weight.

LONG RUGGED LIFE-unique coil and zig-zag spring construction. A patent is pending on this sensational spring design.

Write for more facts to

PATENTED SADDLE

makes the back float -

there's no other seat on the market that's got it!

UNISON-ACTION SEAT DIVISION

AMERICAN METAL PRODUCTS COMPANY



5991 LINSDALE AMD DETROIT 4, MICHIGAN

1960 TRUCK SPECIFICATIONS

Continued from page 314

	WHEEL- BASE				TIRE	SIZES		ENGINE D	ETA	IL8			TRANSMISSI	ON	REAR AXLE				
MAKE AND MODEL			Weight	# (al rear gle rear						-		ds			ent		
MODEL	Minimum Standard	Maximum	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	Standard Front and Rear	Maximum Authorized Tire Size (Duals unless noted)	Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M Given	Make and Model	Forward Speeds	Make and Model	Goar and Type	Drive and Torque	Gear Ratio Range in High	
ix-Wheelers—Cont	162 160	208	40000	11500	8.25/20 10.00/20 11.00/20	9.00/20 11.00/20 12.00/20	Her JXD Con B6427 Cum HB600	6-4x41/6 6-4/6x47/6 6-4/6x6	320 427 672	6.2 6.6 17.0	240 325 495	113-3000 141-2600 150-1800	Fu 5B332 Fu 5A43 Fu 5A920	5	Tim SBD1055 Tim SD3010 Tim SD454	BF 2F SF2	R	8.27- 6.8 -8.1	
abce (c)FD2018 (c)FD2018 (c)FD2518 WT	130	Opt	30000 40000	10500 13000	8.25/20 8.25/20 8.25/20 9.00/20	9.00/20 9.00/20 9.00/20 9.00/20	Ford Ford Ford	8-3.5x3.1 8-3.6x3.1 8-3.8x3.5 8-3.8x3.6	239 256 317 332	7.5 7.5 7.2 7.6	215 228 286 328	132-4000 140-3000 170-3900 212-3800	Ford* Ford* Ford* Clark**	10	Ford Ford Ford Tim F105	HF HF SF HF	1 14	7.17-7.	
WD 6-388 (D) 6-364D (D) 8-385D (D) 8-365D (D) 8-4050 (D) 8-4050 (D) 8-4050 (D) 8-4050 (D) 8-4050 (D) 8-4501 (D) 8-4501 (D) 8-4501 (D) 8-4501 (D) 8-4501 (D) 8-650 (D) 8-6501	184 184 192 192 192 182 184 184 184 178 160 160 162 162	211 211 233 233 216 216 211 233 233 211 233 233 211 211 211 211	36000 36000 40000 40000 60000 60000 45000 45000 45000 48000 48000 33000 35000 36000 46000 46000	13200 13980 12400 14250 15150 18990 13550 14900 15720 15800 11400 11500 11500 113050 13650 13650 15370	8.25/20D 8.25/20D 8.25/20D 8.25/20D 9.00/20D 9.00/20D 12.00/20D 12.00/20D 12.00/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D 8.25/20D 8.25/20D 8.25/20D 8.25/20D 10.00/20D 10.00/20D 8.25/20D 8.25/20D 10.00/20D 8.25/20D 8.25/20D 10.00/20D 8.25/20D 8.25/20D 10.00/20D 8.25/20D 8.25/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D 10.00/20D	9.00/20 9.00/20 9.00/20 10.00/20	Int RD489 GM 4-71 Cum HR788 Int RD581 GM 6-71 Cum MH220 Wau 146GKB GM 6-71 Cum NH220 Int RD501 GM 6-71 Cum NH220 Int RD501	6-49475 4-49475 6-8947	284 743 501 426 743 501 426 743 501 426 743 501 300 377 400 400 400 400 400 400 400 400 400 4	17.0 15.5 6.5 16.0 15.5 6.5 16.0 15.5 6.5 16.0 15.5 6.5 16.0 15.5 6.5 16.0 15.5 6.5 16.0 15.5 6.5 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	375 580 444 570 607 595 570 607 444 570 607 444 286 308 308 407 444 444 570 607 444 570 607 607 607 607 607 607 607 607 607 6	212-300 227-225 220-210 240-240(227-225 220-210 212-300 227-225 220-210 212-300 212-300 154-380 175-320 175-320 212-300 212-300	Ful 8C65 Ful 5C72 Int T70 Ful 5C72 Int T70 Ful 5C72 Ful 5C72 Ful 10A1120 Ful 10A1120 Ful 10A1120 Int T70 Ful 5C72 Ful 5C72	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Own 6-33AR Own 6-33 Own 6-23L Own 6-23L	5FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	TTTTTTT	4.7 -11. 4.7 -11. 4.7 -11. 4.7 -11. 4.7 -11. 5.7 -8. 5.7 -8. 5.7 -8. 6.7 -11. 4.7 -11.	
larmon-Herrington T756 T800 T756/	156 156 156	192	43000	10838	10/22.5D 11/22.5D 3 10/22.5D 3 11/22.5D	10/22.5 11/22.5 10/22.5 11/22.5	Ford Ford Ford	8-311x311 8-311x311 8- 8-	33	7.0	312	205-380	0 Cla 265V	5	Tim SFHD Tim SLHD Eat 28M Tim SLHD	SF SF SF		** -7	
Dehkoeh W-825-6X((D) W-826-6X((D) WA-906-6X((D) WA-160(18-34	176 176 206 236 156		65000	19000 23200 23200	11.00/20 11.00/20 11.00/24 11.00/24 10/22.5†		Con R6602 Cum H6B Cum HRF6B Cum NH220 Int RD501	6-474x5% 6-474x6 6-514x6 6-514x6 6-414x514 6-414x514	60 67 74 74	2	512 580	160-180 190-200 220-210	0 Own MT825 0 Own MT826 0 Own MT906 0 Own MT1800 0 Own MT18 0 Own MT18	10 12 12 10		2F 2F			
Peterbilt (D)	1 180	Opt Opt Opt Opt	47000 47000 59000	13100 12900 16500 20700	Opt Opt Opt	11.00/22 11.00/22 12.00/24 12.00/24	Cum NH220B Cum NH220B Cum NH220B Cum NH220B	6-51/6x6 6-51/6x6 6-51/6x6 6-51/6x6	74	3 15.	5 606	220-210	0 Spi 8041† 0 Spi 8041† 0 Spi 8041† 0 Spi 8041†	12 12 12	Tim SQHD† Tim SQHD† Tim SRDD† Tim SFDD†	HF HF H2F H2F		4.44-8 4.44-8 5.76-1 8.08-1	
Ree	2 150 152 156 6 156 156 157 157 157 157 157 157 157 157 157 157	000000000000000000000000000000000000000	3700 4200 4700 4700 4300 5000 4200 4200 4200 4200 4200 4200 42	0 *10160 *170750 *110750 *113670 *113570 *125880 *125880 *115160 *138830 *138830 *138830 *138830 *15160 *15561	9 9:22.5 0 9:22.5 0 10:22.5 0 10:22.5 0 10:22.5 0 10:22.5 0 10:22.5 0 10:22.5 0 10:22.5 5 10:22.5 5 10:22.5 5 11:22.5 5 11:22.5 5 10:22.5 6 10:22.5	18/22.8 19/22.5 11/22.5 12/22.5 12/22.5 12/22.5 12/22.5 12/24.5 11/22.5 11/22.5 11/22.5 11/22.5 11/24.5 11/24.5 11/24.5 11/24.5 11/24.5 11/24.5 11/24.5 11/24.5 11/24.5 11/24.5 11/24.5 11/24.5 12/24.5	Own OA148† Own OA148† Own OH170* Own OY207* Own OY207* Own OY207* Own OY207* Cum NH180* Cum NH180* Cum NH180* Cum NH180* Cum NH180* Cum NH180*	8-41-24-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	33 33 33 36 33 38 38 38 38 67 67 67 67	1 6.7 1 7. 1 7. 1 7. 1 7. 1 7. 1 7. 1 7. 1	3 27(5 29) 5 29) 5 29) 5 29) 5 32(5 29) 5 33 35 3 35 3 35 3 35 5 5 5 5 5 5 5 5	0 145-32(7 7 170-34(7 7 170-34(7 7 170-34(7 7 170-34(7 7 170-34(7 7 170-34(4 207-34(4 207-34(4 207-34(4 207-34(4 207-34(4 180-21) 4 180-21(4 180-21(4 180-21(4 180-21(4 180-21(4 180-21(4)	00 Cla 250V 00 Cla 250V 00 Cla 250V 00 Cla 350V 00 Cla 300V 00 Cla		5 Tim SLHD 5 Tim SLHD 5 Tim SLHD 5 Tim SLD 5 Tim SQD 5 Tim SQD 5 Tim SQD 6 Tim SQD 6 Tim SQD 6 Tim SQD 8 Eat 38DP 8 Eat 38DP 9 Tim SLHD 6 Tim S	SF HF HF2 SF HF HF SF HF HF SF SF HF HF HF SF SF HF	T T T T T T T T T T T T T T T T T T T	6.16-8 7.00-8 6.14-7 5.28-6 5.28-6 5.28-6 5.28-8 4.87-7 4.87-7 4.87-7	
Ward-La Fr 400R-4 	16 14 16 14 16 14	15 19 15 19 15 19 15 19	3 6000 3 4200 3 4900	10 1465 10 1635 10 1289 10 1565	7 10.00/20 60 11.00/22 12 11.00/22 17 10.00/26 60 11.00/22 10 11.00/22	*******	Con T6427 Con U6501 Con R6602 Cum JBS Cum HRFB Cum NH220	6-4-4-x47/ 6-4-5-x51/ 6-4-7-x55/ 6-4-7-x56/ 6-51/-x6	74	11 6. 12 6. 11 13. 13 15.	4 35 1 41 2 48 0 37 5 58 5 60	2 178-26 4 232-28 5 160-25 0 190-20	00 Ful 5A43 00 Ful 5A62 00 Ful 5C72 00 Ful 5A65 00 Ful 5C72 00 Ful 5W74	and and and and	Tim SLHD Tim SQDD Tim SFDD Tim SLHD Tim SQDD Tim SLHD Tim SQDD Tim SFDD	H H 2H H H 2H			
White-Freightliner (D)WFT7564 (D)WFT6342 (D)WFT636	T 11		i0	999	25 11/22.5 15 11/22.5 15 11/22.5	*******	Gum NH220 Gum NH220 Gum NH220	6-51/4x6 6-51/4x6 6-51/4x6	7	13 13.	6 57	5 220-21 5 220-21	00 Fu R96 00 SP 8041 00 SP 8041	10	TDA SOHD TDA R330 TDA SOHD	WF SfD WF		4.77-6	

For references and abbreviations see page 306



BRAKE MAINTENANCE COSTS REDUCED

with PRECISION HEAVY DUTY BRAKE SERVICE EQUIPMENT

The ideal Brake
Drum Lathe for
Precision Service
and Continuous
Heavy Duty
Operation



Dual Carriages — Machine and Grind, or Heavy and Finish Cut at the Same Time.

IT'S BIG — COMPARE ITS SIZE TO A "JEEP"

Select Arbors and
Adapters to Fit
Your Requirements
. . . or Utilize Cones,
Adapters and Attachments
Available in Your Shop



SHOE FITTING EQUIPMENT



B-120C BRAKE DOKTER

A spindle mounted lining surfacer. Precision fits brake lining to brake drum on the vehicle.

B-350B

BRAKE SHOE GRINDER

Bench type heavy duty grinder, Precision fits brake lining to brake drums off the vehicle.



LINING INSTALLATION EQUIPMENT

B-85 SUPER AIR POWER RIVETER

Specially designed for extra heavy riveting and deriveting operations. Also adaptable for industrial applications.





B-57 RELINER AND GRINDER

Extra heavy duty, deep throat relining machine. Quickly and accurately delines, countersinks, rivets and grinds brake shees.

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Branch Operations: Miami, Fla. — Los Angeles, Calif. — Philadelphia, Pa. — Cleveland, Ohio Export: Springfield, III. — Canada: Toronto, Edmonton

1960 BUS SPECIFICATIONS

				partition on	(BENE	RAL		70.00	ENGINE												
Line Number	BUS MAKE AND MODEL	Passenger Rating	Type (City Service, Parler, etc.)	Standard Wheelbase (In.)	Overall Length (In.)— Bumper to Bumper	Inside Length (In.)—Passenger Compartment	Tread (In.)— Front and Rear	Complete Vehicle Weight-Dry (Lb.)	Standard Tire Size (In.)— Front and Rear	Make and Model	Cycle and Fuel	Lecation	Number of Cylinders— Bore and Stroke (In.)	Displacement (Cu. In.)	Rated Horsepower (A.M.A.)	Maximum Brake Hp. at Governed R.P.M.	Maximum Net Torque (Lb. Ft.) at Specified R.P.M.	Compression Ratio—te 1	Compression Pressure— (Lb.) at Specified R.P.M.	Valve Arrangement	Pressure to-	
1 2 3 4 5 6 7 8	Grewn A-501-10 A-500-10 A-501-11 A-709-11 A-778-11 AD-743-11 AD-743-T-11 AD-743-T-1	33-41 37-45 37-45 37-45 37-45 37-45	IC IC IC IC	200 2 200 2 232 23	384 384 4191 4191 4191 4191 4191 480	3531 3531 388 388 388 388 388 450	8014-72 8014-72 8014-72 8014-72 8014-72 8014-72 8014-72	18500 18500 19200 19200 20500 21200 21200	10.00/20 10.00/20 11.00/20 11.00/20 11.00/22 11.00/22 11.00/22 11.00/22	HS 590BH1 int 501 HS 590BH1 HS 779 Cum NHHB600	4-G 4-G 4-D 4-D	UF UF UF UF UF	6-416x514 8-5x5 8-416x516 6-5x5 8-514x6 8-514x6	501 590 501 590 779 743 743	48.6 60.0 48.6 60.0 29.8 27.0	212 - 3000 232 - 2800 212 - 3000 232 - 2800 254 - 2400 210 - 2100 250 - 2100 220 - 2100	490-1600 445-1400 490-1600 618-1600 570-1600 690-1500	6.70 6.50 6.70 6.10 15.5			acd acdef acdef acdef abcd abcd abcd	
9 10 11	Flxible 218WA-1, 2183WA-1 218GM-1, 2183DD-1 2382DD-1	29 29 41	IC	218 218 236	410% 410%		801 695 801 995 803 711		9.00/20 9.00/20 11.00/20		2-D	R	8-3%x5 4-4%x5 6-4%x5	284	28.9	200-2900 150-2100 210-2100	387 1600	16.0		1	abcdf abcd	
12 13 14 15	Fixible-Twin Coach FT-33 FT-35 FT-40 FT-40DL	44 52	CS CS CS	222 2321 2743 2743	403 420 480 480	378 402 462 462	80% 72 80% 72 80% 72 80% 72	15800 16600 18500 18500	10.00/20 10.00/20 11.00/20 11.00/20	Fag. FTC-200 Fag. FTC-210	4-G		6-484x5 6-434x5 6-434x5 6-414x534	451 477	45.9 48.6	200-2800 200-2800 210-2800 100-2225	480 1600	7.28			abed	
16 17 18 19 20 21 22 23 24 25 26	G.M.C. TGH-3102 TDH-3714 PD-4104 SMD-4501 TDH-4516 TDH-4517 TDM-4517 TDM-4517 TDH-5302 TDH-5302 TDH-5302	37 41 45 45 45 45 53 53	P CS CS CS CS	1801 2101 261 235 235 235 235 2843 2843 2843 2843 2843	3255 389 420 420 420 420 420 480 480 480 480	287 336 390 382 382 382 441 441 441 441	81 4 78 4 79 4 70 9 70 4 70 9 70 4 70 9 85 4 76 70 9 70 4 70 9 70 4 70 9 70 4 70 70 70 4 70 70 4 70 70 4 70 70 70 70 70 70 70 70 70 70 70 70 70	9635	8.25/20 10.00/20 11.00/20 10.00/20 11.00/20 10.00/20 10.00/20 11.00/20 11.00/20 11.00/20 11.00/20	Own 4-71 Own 8-71 Own 8V71 Own 6V71 Own 6V71 Own 6V71 Own 6V71 Own 6V71 Own 6V71	2-D 2-D 2-D 2-D 2-D 2-D 2-D 2-D 2-D	TR TR TR TR TR TR TR	6-3 x4 4-4 x5 8-4 x5 6-4 x5	284 426 426 426 426 426 426 426 426	28.9 43.4 43.4 43.4 43.4 43.4 43.4 43.4	124 3200 140 2000 211 2000 204 2000 190 2000 190 2000 204 2000 190 2000 204 2000 190 2000 204 2000	375 1600 574 1600 577 1200 550 1200 550 1200 577 1200 577 1200 577 1200 550 1200	16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	450- 600 450- 600 475- 600 475- 600 475- 600 475- 600 475- 600 475- 600		abedfy abedfy abedfy abedfy abedfy abedfy abedfy abedfy abedfy abedfy abedfy	
27 28 29	Mack	41 45 51	CS CS	234 258 289	396 420 473	3805 3845 4341		18500	10.00/20	Own. END6731 Own. END6732 Own. END6732	4-D	TR	6-436x6 6-436x6 6-436x8	672	57.0	170 - 2100 170 - 2100 170 - 2100	480 120	0 16.6	530-1000	i i	acdeh acdeh	
30 31 32 33 34	Southern Coach S-45-DHC S-38-DHL S-41-HF S-50-DHC R-37	45 36 41 50	CS CS	2218	419 356 391 461 356	404 341 377 447 316	8014-72 2 8014-71 2 8014-72 8674-72 901-71	18714 14460 15300 21310 14530	10.00/20 11.00/20 11.00/22	Fag FTC180	D 4-G 4-D	UF UF	6-51-4x6 6-41-4x5 6-41-4x4 6-51-4x6 6-43-4x5	597 404 743	55.2 43.4 63.0	200-2100 160-2400 180-2400 200-2100 182-3000	452-120 390-160 535-120	0 15.8 0 7.50 0 15.5			abedf aedfyi aedf abedf abedf	

ABBREVIATIONS

- 4—Two used.
 2—Torque converter.
 4—Generator, Delco-Remy; starter,
 Auto-Lite.
 4—Front, 14%; rear, 15.
 4—Hundred rpm.
 Air susception.

- Air suspension.
 EN510C propane engine optional.
- 2—EN510C propane and ENDT673 diesel engines optional.
 3—Four speed mechanical transmission optional.
 4—10 or 12 also available.
 8—Main bearings.
 5—Wrist pins.
 6—Connecting rods.
 d—Camshaft.

- e—Accessory drive.
 f—Valve litters or rocker arms and shafts.
 g—Timing gears or chain.
 h—Air compressor.
 i—Balancer shaft.
 j—Blower drive.
 A—Air.
 AL—Electric Auto-Lite Co.
 BL—Brown-Lipe.

- Bon—American Bosch Div.
 Ce—Centrifugal.
 CIC—City and intercity service.
 Cla—Clark Equipment Co.
 CS—City service.
 Cum—Cummina Engine Co.
 D—Diesel fuel.
 Do—Downdraft.
 DR—Delco-Remy Div.

TRANSPORTATION ENGINEERING **FORMULAS**

To help you in new truck selection, here are formulas often used to determine their operating characteristics. Symbols used are defined as follows . . .

B-engine piston bore-in. DP—drawbar pull—lb.
FGR—final gear ratio.
GA—grade ability—per cent.
GVW—gross vehicle weight—lb.

HP—horsepower. Maximum net horsepower (maximum gross horsepower less power consumed by engine accessories) as determined by using a dynamometer (can be obtained from the manufacturer) should

be used.

MPH—miles per hour.
PD—piston displacement—cu in.
R—rolling radius—in. Divide distance covered in inches in one wheel revolution with vehicle loaded by 6.28.
RPM—engine revolutions per minute.
S—engine piston stroke—in.

T—engine torque—lb-ft. To find torque in lb-in., multiply torque in lb-ft by 12. As in the case of horsepower, it's best to use actual dynamometer-measured net torque.
TE—tractive effort—lb.

Horsepower-HP

(Result is only approximate and should only be used when maximum net horsepower is not known)

T x RPM

5252.1

TRANSIT & INTERCITY

FUEL SY	STI	EM	E	SYST	RICAL		iov-		TRA	NSN	MISSI	ON		Uni- roals	REAR	AXLE			1	BRAK	ES			SPR	ING	3		JNNIR GEAR		
Carburet or Inject	lor		Make		Battery	-	T			ap.	-		-						Servi	ce	н	and		Front		Rear			3	
Make and Type	Size (In.)	Tank Canacity (Gal.)	in System	Generator and Starter—Make	Voltage and Amp. Hours Capacity	Туре	Max. Governed Speed - M.P.H.	Clutch-Make and Size (in, dlam.)	Make	No. of Forward Spee		Туре	Number	Size of Series	Make and Model		Standard Gear Ratio—to 1	Type of Applicator	Total Lining Area (Sq. In.)	Drum Diam. (In.)	Operates en-	Total Lining Area (Sq. In.)	No. of Leaves	Length and Width (In.)	No. of Leaves	Length and Width (In.)	Front Axio-Make	Steering GearMake	Outside Diameter of Min. Turn. Circle (Ft.)	Line Number
tol . Do tol . Do tol . Do tol . Do tol . Do cum		77 77 77	DR DR DR DR DR DR DR DR	+ + + + LN LD	12-158 12-158 12-158 12-158 12-158 12-158 12-158 12-158	Su Su Su Su V	Var Var Var Var Var	Lg 151- Lg 151- Lg 17 Lg 17 Lg 17 Spi 14	Fu	5 5 5 5 5	8.08 8.08 8.08 8.00 7.33 7.33	M H M M M	2222222	1600 1700 1600 1700 1700 1700 1700 1700	Tim QT Tim L Tim QT Tim R Tim R Tim R	143P 5 143P 4 143P 4 143P 4 143P 4 143P 4 LHD 4	.63 .29 .63 .11	-	960 960 960 960 960 960 1216	161/2 161/2 161/2 161/2 161/2 161/2 161/2	De De De De De De De De	65 65	11 11 11 11 12 12 12 12	50-4 50-4 50-4 50-4 50-4 50-4 80-4	17 17 17 17 18 18 18	60-4 60-4 60-4 60-4 60-4 60-4 57%-4	Tim Tim Tim Tim Tim Tim Tim Tim	Ro Ro Ro Ro Ro Ro Ro Ro Ro	70 70 78 78 78 78 78 102	
Dup. Do		9	DR DR	DR DR DR	12-160 12-160 12-160	Ce	69 66 79	Lg 1834 Lg 1534 Lg 17	Soi	4 5 5	4.35 5.06 5.06	M M	2 2 2	1600 1500 1600	Tim	143P 4 H143 4 R163 3	1.82	A A A	610	163-5 163-5 163-5	Ds	45 45	A				Tim Tim Own	Ro Ro	76 76 81	1
tel . Do tel . Do tel . Do			DR	LD LD LD	12-100 12-160 12-160 12-160	Ce Ce Ce	28° 28°	None None None	Spil Spil Spil Spil		5.43 5.43 5.43 5.43	HHH	2222	1600 1600 1600 1600	Tim	0110 0 0110 0 R110 0	1.16		844 844 844	163-5 163-5 163-5 163-5	Da Da Da Da	63 63 63	13 12 13 13	58-4 60-4 60-4	13 13 15 15	60-4 64-4 64-4	Tim Tim Tim	Re Re Re	6735 6035 7935	1
Own Own Own	13/2	8 8 14 9 9 9 9 9 9 9 9	DR DR 0 5 5 5 5 5 5 5 5 5	DR	12-150 12-175, 12-205, 12-175, 12-175, 12-175, 12-175, 12-175, 12-175, 12-175,	Ce Ce Ce Ce Ce Ce Ce Ce	4954 4814 5514 4514 5914 4514	Lg 17 Own 16 Lg 16 Lg 17 Lg 17 Lg 17 Lg 18	GM GM 2 Spi Spi GM 2 Spi GM 3 Spi Spi Spi	1f 4 4 1f 1f 4 1f 4	3.82 3.86 4.36 4.35 4.36	GH M M H H M	222222222	1700 1700 1700 1700 1700 1700 1700 1700	Tim 576 Tim . 58600 Tim . 58822 Tim . 58823	WX2 WX1 WX1 WX1 WX1 WX1 WX2	5,16 1,13 1,71 1,71 1,71 1,13 5,14 1,11 5,14	-	620 646 764 705 605 706 706 882 882 882 882	1416 1416 1416 1416 1416 1416 1416 1416	De D	28 69 125 104 104 104 104 104 104 104	10	52-3	6 6	59-3	Cla Tim Tim Tim Tim Tim Tim Tim Tim Tim	Sag Sag Ro Sag Sag Sag Sag Sag Sag Sag	06 0934 84 72 7434 78 78 8434 8234 8434 8434	1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Bos Bos		. 8		LD LD	12-350 12-350 12-350	Ce	210	Soi 10	Spi 12 Spi 12 Spi 12	RF.			222	1700	Own RA	\$402 \$402 \$402	Var	*	784 784 843	15 15 15	Da Da Da	139 139 139	A		. 4		Own Own Own	Gem Gem	661	
Cum Ros Hol . De Cum Hol . De	1	. 11	5 Mai	Op	12-168 12-168 12-168 12-168 12-168	Su	41 41 41 41 50	Spi 14 Spi 16 Spi 16	Spit Spit Spit Spit Spit	of of of	3.80	MHHH	22222	1600	Tim L Tim Q	110P 110P 110P 110W	3.16 3.83 3.83	***	786 622 685 904 684	1616 1616 1616 1616 1616	Da Da Da Da	126 101 101 126 96	13 11 12 ^	62-31 62-31 62-31	12 14 2	70-4 70-4 70-4	Tim Tim Tim Tim	Re Re Re Ro	8434 7134 80 8234 63	

Ds—Drive shaft.
Dup—Duplex.
Fag—Fageol.
F-S—Fuller or Spicer.
Fu—Fuller Mfg. Co.
G—Gasoliner Mfg. Co.
Gem—Gemmer Mfg. Co.
GH—G. M. Hydramatic.
GM—General Motors Corp.

H—Hydraulic.

Hol—Holley Carburetor Co.

HS—Hail-Scott.
I—Valve in head.
IG—Intercity service.
If—Infinite.
Int—International Harvester Co.
I—Valves in side.
ID—Lece-Neville (alternator); Delco-Remy (starter).

Lg—Long Mfg, Div.
LN—Leece-Neville Co.
LR—Lipe Rollway Corp.
Mal—Mallory. P—Parlor.
Op—Optional. R—Rear.
Re—Ross Gear and Toc Co.
Ross—Rossa-Master.
Rw—Rear wheels.
Sag—Saginaw Steering Gear Div.

Bpi—Spicer Mfg. Div.
Su—Suction.
Im—Timken Detroit Axle Co.
TR—Transverse in rear.
UF—Under floor.
V—Vacuum.
Var—Variable,
Whl—White Motor Co.
Zan—Zenith Carburetor Div.

Torque at Peak HP—T

HP x 5252.1 RPM

Maximum Net Torque—T

(Result using either formula is approximate and should only be used when actual net torque is not known)

4

(For torque at peak horsepower, see formula

Grade Ability—GA

of .90)

R

Drawbar Pull-DP

Vehicle Speed-MPH

RPM x R

168 x FGR

T (Ib-in.) x FGR x .90 x .012 x GVW

(For worm gear rear axle, use .85 instead

Piston Displacement—PD

B x B x .7854 x S x No. of Cyl

Final Gear Ratio—FGR

R x GVW x (GA + .012)

T (lb-in.) x .90

(For worm gear rear axle, use .85 instead of .90)

Tractive Effort—TE

T (16-in.) x FGR x .90

R (For worm gear rear axle, use .85 instead of .90)

COMMERCIAL CAR JOURNAL, April, 1960

Take a look at a dramatically different aluminum tank*

Revolutionary new Trailmobile uses integral extrusions as main structural members to achieve the first major break-through in aluminum tank design.

This new Trailmobile is not just another steel tank design fashioned in aluminum. It is a basic and radical departure from conventional design that for the first time utilizes the full potential of aluminum.

In place of the usual shell welded together in sections and heavily reinforced at points of stress, this tank uses as primary structural members aluminum extrusions which are an integral part of the shell itself. Located at the top and bottom of the shell where stresses are the greatest, these extrusions eliminate



weakening cross-wise welds and provide strong longitudinal members to dissipate stresses and strains over the entire length of the unit. And in this respect the new design is much like that of an I-beam, which is also integrally reinforced at top and bottom to resist damaging, concentrated loads and bending forces—the chief causes of costly failures in tank trailers. All this adds up to greater strength plus lighter weight—which is the ultimate aim in designing in aluminum. And to you this is added assurance against costly failures that result in leakage, downtime and loss.

TRAILMOBILE INC.

CINCINNATI 9, OHIO

TRAILMOBILE INC., Cincinnati 9, Ohio

Please send illustrated folder on your new aluminum tank.

Please have salesman call.

Licase have satesman can.

company

atreet

city_____sone___state___

Be sure to get complete information on this totally different aluminum tank. Contact your nearby Trailmobile representative or use the coupon.



ENGINE POWER RATINGS

Diesel-

	•7	MAX. I H.P. at	BRAKE R.P.M.			TORQUE	Ignition (Lb.)		-7	MAX. 6 H.P. at				TORQUE	out n (Lb.)
ENGINE MAKE AND MODEL	Number of Cylinders Bare and Struke (In.)	With Bare Engine	With Standard Accessories	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.)	Engine Weight With Carbureter or Ignitio	ENGINE MAKE AND MODEL	Number of Cylinders Bere and Stroke (In.)	With Bare Engine	With Standard Accessories	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. FL)	Engine Weight Without Carburetor or ignition (Lb.
ALBION EN250 EN335	4-4-1-x4% 4-41/x51/4	80-2200 103-2200	*******	251.0	16.00	210-1300 277-1250	.,,,,,,	GENERAL MOTORS 6-71E 6-110T	6-41/4×5	218-2100 375-2000		426.0	17.00	604-1200 685-1600	2010
ALLIS-CHALMERS ADS516	8-4-1-x5-1-	120-1600				440-1200	2130	6-110T 3-53 4-53 6V-53 6V-71 8V-71 12V-71 3-71 4-71E	3-3%x41/6 4-3%x41/6 6-3%x41/6	97-2800 130-2800 195-2800	58-2200 82-2200 125-2200 162-1800 215-1800 324-1800	150.0 212.0 318.0	17.00 17.00 17.00	200-1500 271-1500 411-1200	940 1110 1340
CERLIST 3	3-4x4\/2					170-1800	605	6V-71 8V-71 12V-71	6-41/4x5 8-41/4x5 12-41/4x5	252-2300 334-2300 504-2300	162-1800 215-1800 324-1800	428.0 568.0 851.0	17.00 17.00 17.00	577-1200 770-1200 1154-1200	2010 2505 3505
CONTINENTAL	B-4x459					320-1800	940	3-71 4-71E	3-41/4x5 4-41/4x5	109-2300 145-2100	********	213.0 284.0	17.00 17.00	277-1400 386-1200	1550
TD-6427 RD-6572 SD-6802 VD-8603	8-4%x41/4	147-2600 172-2400 225-2200 200-2800		802.0	14.50 14.50 14.70 15.80	336-1600 428-1300 620-1300 460-1700	1270 1785 1696			150-3000 145-2600 180-2600	75,5-1800 96-1800 120-1300	298.0 426.0 426.0	15.00 17.00 18.75	268-1800 320-1800 406-1900 114-1400 130-1400	785 1350 1400
CUMMINS J-6 JF-0 JN-6 JN-6 JS-6 JN-6 JS-6 JT-6 HR-1 HRC-4 NHC-4 NHC-4 NH-100 NH-109 HR-0 ² HRF-6 HR-6 ³ HR-6 NH-2206 NT-6 NT-6 NT-6 NT-6 NT-6 NT-6 NT-6 NT-6	6-41-6x5 8-41-6x5 6-43-6x5 8-43-6x5	100-1800 110-2200 130-2500 160-2500	79-2000 90-2200 110-2200	401.0 401.0	15.70 16.30 13.00	295-1800 375-1700	1505 1545	MERCULES D-280-HT D-426 D-426-T DD-140-H DD-198-H DD-198-H DD-226-H D-239-H	3-3%/x41/2 3-4x41/2 4-3%/x41/2 4-4x41/2 6-35/x41/2	48-2600 52-2600 72-2600 78-2600 112-2800		149.0 169.0 198.0 226.0 298.0	15.00 15.00 15.00 15.00 15.00	114-1400 130-1400 156-1500 178-1500 240-1600	1111
JNS-6 JT-6 HR-4	6-41/4x5 6-41/4x5 4-51/4x6	175-2500 175-2500 115-1800	122-2200 121-2200 85-1800	401.0 401.0	15.50 16.30 15.50	407-1750 407-1750 375-1200	1610	D-339-H	6-4x41/2	120-2800	*10*****	339.0	15.00	270-1500	7.7 29.4
NHC-4 NT-105	4-53/4x6 4-53/4x6 4-53/4x6	115-1800 130-2000 165-2000	85-1800 93-1800 117-1800	495.0 495.0 495.0	15.50 15.50 15.50	375-1200 403-1200 475-1400	1755	D252	6-3-4x421	110		252.0	18.00	V#####################################	
H-6 NH-180 NH-195 HR-6 ⁵ HRF-6	6-476x6 6-476x6 6-476x6 6-576x6 6-576x6	160-1800 180-2100 195-2100 175-1800 190-2000	136-1800	672.0 672.0 743.0 743.0	15.50 15.50 15.50	535-1500 550-1300 580-1300	2400 2420	LEYLAND							
HS-6 HRS-6 NH-220 ⁵	6-4%x6 6-516x6 6-516x6	210-1800 240-1800 213-1950	180-1800	743.0	14.00	673-1250 753-1300	2475 2610 2420	0350 0375 0600 0690	8-411x51/2 6-5x53/4	138-2800 165-2000	********	597.0 677.0	15.75 15.75	240-1400 314-1100 451- 900 495-1100	*****
	0.07840	250-2100 262-2100 290-2100 320-2100 300-2100	170-1800 172-1800 192-1800 220-1800 201-1800	743.0 743.0 743.0 743.0	15.50 15.50 15.50 13.50 12.00 14.50	995-1500 775-1500 865-1600 810-1550	2515 2515 2720 2720 2525	MACK END873 ENDT673	6-4%x6 0-4}{x4}}	170-2100 205-2100 120		672.0 672.0 437.0	16.58	480-1200 500-1400	1927
NHRS-6 NRTO-6 NT-180 NT-200 C-90 C-105 C-160 C-175 NH-250 NT-420	6-5)4x6 4-5)4x6 4-5)4x6 4-44x5 4-44x5	335-2100 180-2100 200-2100 90-2000 105-2500 160-2500	d2-1800 72-2200	495.0 495.0 307.0 309.0	0 15.50 0 15.50 0 15.80 0 14.50	540-1500 246-1450	1995 1995 1186 1186 1670	MERCEDES-BENZ OM636. OM312 OM321 OM315.	4-2-6-x3+1 6-3-1-x4-1 6-3-1-x4-1 6-4-1-x5-1	46-3500 110-3000 120-3000 145-2100		108.0 280.0 311.0 505.0	19.00 19.50 20.80 18.50	69-1800 171-1700 238-1800 308-1300	**************************************
C-175 NH-250 NT-420 J-80 NHE-180 NHE-195		175-2500 250-2100 420-2300 75-2200 180-1950 195-1950	121-2200 172-1800	464.0 855.0 855.0 267.0 743.0	0 14.50 0 15.00 0 15.70	405-1750 710-1200 1100-1400 198-1300	1670 2450 3100	P. & H. 387H-18T 487H-18T 687H-18 687H-18T 387H-18AT	3-41-5x51-5 4-41-5x51-5 8-41-5x51-5 8-41-5x51-5	165-1800 220-1800 260-1800 330-1800	115-1800 160-1800 180-1800 226-1800	281.0 348.0 522.0 522.0	17.00 17.00 17.00 17.00	509-1500 680-1800 835-1400 950-1600 506-1500	1280 1480 1840 1894
DEUTTO		1			1	92–1800	661	VOLVO							
F4L-712 F6L-712 F6L-714	4-3%x4% 6-3%x4% 6-4%x5%	60-2800 90-2800 160-2300	40 2000	207 (0 00 00	109 1000	903	D47A D67C D96B	6-41/sx51/s 6-43/(x5)/s	115-2400 150-2200		410.0	17.00	203-1400 280-1200 427-1100	
F3L-712 F4L-712 F6L-712 F6L-714 F8L-714 F12L-714 FAGL-514 BFAGL-514	8-4% x51 12-4% x51 4-4% x51 6-4% x51 8-4% x51	220-2300 350-2300 90-2300 132-2300 157-2300	*******	487	0 17.80	123-1600 184-1800 1375-1200 1440-1200 1655-1200 1215-1200 1310-1200 1361-1500	1840 1871 2796	WAUKESHA 180-DLC 185-DLC 190-DLCA	4-31/5x35/4 4-31/5x35/4 6-35/4x4	45-2400 60-2400 84-2800 98-2800	44-2000 58-2000 67-2000	216.0 265.0 302.0	17.00 17.00	1 221-1800	47: 80: 86: 96:
OFNERNI MOTOR		150 000		-			1570	135-DKB 135-DKBS ⁷	6-414x5 6-414x5 8-514x6	147-2800 185-2800 200-2100	99-2000	426.	17.80 17.80 17.80	328-1600 400-1800	138 148 232
4-71T 6-71 6-71T 6-110 4-71E	4-414x5 6-414x5 6-5x511 4-414x5	171-2300 243-2100 310-2300 300-2000 145-2100		284. 428. 426. 860. 284	0 17.00 0 17.00 0 17.00 0 18.00	375-1600 0 411-1600 0 574-1600 0 630-1600 0 849-1400 0 385-1200	1780 1975 2165 3260 1550	WAUKESHA 180-DLC 183-DLC 189-DLCA 199-DLCA 135-DKB 135-DKB\$ 148-DKB\$ 148-DKB\$ WAKDB WAKDB\$7 197-DLC	6-51/4x6 6-61/4x61/ 6-61/4x61/ 6-4x4	280-2100 258-1800 400-1800 91-2800 131-2800	194-1800	779.1 1197.	17.80	706-1800 946-1000 1062-1600 216-1600 275-1800	244 380 392 80 85

ABBREVIATIONS

BE—Bare engine. EA—Engine with standard accessories.

Weight complete with ignition and carburetor.
 Liquefied petroleum gas engine.
 Industrial power ratings.

4—High output engine.
5—Available as a horizontal engine.
6—Air-cooled engines.
7—Turbocharged engine.

-Gasoline-

	•3	MAX. E		_		TORQUE	(C)		*2	MAX. I				TORQUE	Without gnition (Lb.)
ENGINE MAKE AND MODEL	Number of Cylinders Bore and Streke (In.)	With Bare Engine	With Standard Accessories	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.)	Engine Weight Without Carbureter or Ignilion (Lb.)	ENGINE MAKE AND MODEL	Number of Cylinders Bere and Stroke (In.)	With Bare Engine	With Standard Accessories	Pistan Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.)	Engine Weight With Carbureler or Ignitio
BRENNAN B-70 B-100	8-4x5}/ ₂ 8-43/ ₂ x5}/ ₂	90-2000 94-2000	75-2000 80-2000	415.0 496.0	4.50 4.50	278- 900 (EA) 350-1200 (EA)	800 878	GMC-Cent'd 401	6-4%x3}1 12-4%x3}	205-3200 275-2400	178-3200 250-2400	400.9 702.1	7.50 7.50	377-1400 (BE) 630-1600 (BE)	
CHEVROLET	6-3-1-x3-1 6-3-1-x3-1 6-3-1-x3-1 8-3-1-x3-1 8-3-1-x3-1 8-4-x3-1 8-4-1-x3-1	135-4000 135-4000 150-4000 160-4200 160-4200 230-4400 185-4000	110-3600 130-3800 137-4000	238.8 236.5 261.0 283.0 283.0 348.0 348.0	8.25 8.00 8.50 8.00	217-2000 (BE) 235-2000 (BE) 270-2000 (BE) 270-2000 (BE)	552 554 556 528 524 791 785	HERCULES ZXB IXLB OXLD JSC JXD MERCULES-HALL-	SCOTT	113-3000	42-3200 77-3200 87.5-3200 98-3000	141.0 236.7 282.0	6.50	40-1800 (BE) 97-1800 (BE) 190-1400 (BE) 207-1400 (BE) 240-1200 (BE)	293 440 605 605
CONTINENTAL				91.0		70-1500 (BE)		590	6-5x8 6-5%x7	242-2800 368-2300		500.0 1001.0	8.60	492-1800 (BE) 1060-1200 (BE)	1130 2100
F-6196 F-6209 F-6226 M-6271 M-6290 M-6330	6-3 4x434 6-354x434 6-354x434 0-4x434	77-3500 90-3500 90-3500 97-3000 108-3000 125-3000	**********	124.0 140.0 162.0 186.0 209.0 226.0	6.70	94-1500 (BE) 100-1600 (BE) 122-1500 (BE) 142-1600 (BE) 160-1500 (BE)	290 396 395 515 515 756 756 755 879	INTERNATIONAL UB-220 UB-264 U-300 U-372 U-490 U-501 UV-401 UV-401 UV-549	6-3 (x3 (x) x3 (x) x4 (x) x4 (x) x4 (x) x4 (x) x6 (x) x4 (x) x5 (x) x5 (x) x4 (110-3400 148-3400 92-2400 110-2200 134-2200 141-2200 170-2800 179-2800 222-2000	112-2800 87, 6-2400 104-2200 126-2200	264.0 308.0 372.1 460.9 501.0 401.0 461.0	7.50 6.50 6.50 6.50 7.00 7.20	248-2400 (BE) 230-1200 (BE) 288-1200 (BE) 348-1350 (BE) 383-1260 (BE) 350-1900 (BE) 378-1900 (BE)	816 1010 1240 1250 1320 962 962
T-63/1 B-6427 T-6427 U-6501 R-6513 R-6572	8-4-4-14 8-4-4-14 8-4-4-24 8-4-4-25 8-4-4-	170-3000 186-2600 192-2800 220-2800		427.0 501.0 513.0	6.40 6.20 6.00 6.00	350-1300 (BE) 412-1400 (BE) 420-1200 (BE) 484-1200 (BE) 482-1200 (BE) 575-1300 (BE)		MACK EN331 EN401 EN438 EN540 EN707C		122-2800 150-2800 100-2800 185-2400 222-2100	171-2400	438.0 540.0	7.29 7.23 7.22	330-1400 (BE) 350-1400 (BE) 445-1300 (BE)	920 1070 1522 1545 1962
S-6820	6-53/x53/ 6-33/x43/ 6-33/x43/ 6-4x43/ 6-63/x53/ 6-4x411 6-4x411 6-3/x43/ 6-3/x43/ 6-3/x43/	123-3200 147-3200 300-2800 280-3200 146-3000 162-3200 143-4500		271.0 290.0 330.0 820.0 603.0 363.0 226.0 244.0	7.00 6.70 6.50 8.00	232-1400 (BE) 267-2000 (BE) 652-1600 (BE) 512-2000 (BE) 304-1600 (BE) 300-2000 (BE) 212-2000 (BE)	840 960	REO OA-142-LPG ² OH-170 OA-100-LPG ² OH-180-LPG ² OV-285 OV-220-LPG ² OA-110 OA-130 OA-145	0-436x436 0-436x436 0-356x436 0-436x436 0-356x436 0-436x436 0-356x436	170-3400 100-3400 160-3300 207-3400 235-3400 220-3200 110-3400	88-3400 146-3200 186-3400 213-3400 203-3200 96-3400	255.0 331.0 300.0 440.0 440.0 255.0	7.50 7.15 8.20 7.30 7.30 8.50 6.70	297-1600 (BE) 182-1600 (BE) 289-1200 (BE) 354-2400 (BE) 412-2400 (BE) 405-2000 (BE) 194-1400 (BE)	995 1211 1211 1262 872
DODGE WM300	6-31/x45/	113-3600	102-3600	230.2	7.90	198-1600		OA-145 OH-185	6-31/4x41/4 6-41/4x41/4 6-41/4x41/4	130-3300 145-3200 185-3400	119-3300 134-3200 170-3400		6.73	230-1600 (BE) 270-1600 (BE) 320-1200 (BE)	870 872 970
D100, 200, 300; P300, 400; W100, 200 D400, 500; S400,	6-334×454	120-3800	109-3600	230.2	7.90	202-1600	*****	ROILINE TH-570	8-45/x41/	238-3000					
500; W300 W500 Std.; D500.	6-3 ₁₀ x43 ₂	125-3800	115-3800	250.6	7.10	216-1600	ration	TH-844	8-3%x4%	298-2500 330-2900			7.82	730-1700 (EA) 780-1800 (BE)	1900
S500 Opt. D100, 200, 300; P300, 400;		130-3800				228-1600		SEAGRAVE 531 906	12-3%x4 12-41-5x4%	251-3850 306-2850	225-3800 280-2825	530.1 906.6		425-1300 (BE) 650-1400 (BE)	
W100, 200 D400, 500, 600; C500; S460, 500, 600;	8-3}{x3-}	200-3900	164-3900	318.1	8.25	286-2400	*****	STUDEBAKER 1E4E	6-3x4 6-3Ax45/		75-3600 94-3200	169.6	8.00	133-1600 (EA) 196-1400 (EA)	488 825
W300, 508 C800 Std.; D600, 800; C500;	8-3/1x3/4	202-3900	165-3900	318.1	8.25	288-2400	*****	4E	8-3/4x31/ 8-3/4x35/	********	141-3800 154-3800	250.2	7.50	225-2400 (EA) 200-2400 (EA)	710
S600 Opt D700: C700	8-41/(x3%) 8-41/(x3%)	178-3500 194-3500	165-3500 181-3500		7.50	291-2400 310-2400	*****	WAUKESHA FC3	4-314x4	35-2400		133.0	5.58	97-1400 (BE)	290
C800, CT800 Std.; CT700 Opt.	8-43/x35/		186-3500		-	335-2400		FC ³ 180GKBXAM ³	4-356x356 4-356x416		41-2000	155.0	7.50	131-1400 (BE)	450 385
C900, CT900 Std.; CT800 Opt.	8-4-5x3%	217-3500	200-3500	413.4	7.50	373-2000		XAH3 185GLB 190GLB	6-31/x31/4 6-31/x4	67-2400 77-2200	59-2200	216.0	6.78	176-1400 (BE)	740
C1000 Std.; C900, CT900 Opt.		228-3500	205-3500				*****	196GK 196GKA 135GKB ⁴ 135GZB ⁴	6-41-5x4 6-41-5x4 6-41-5x4	103-2400	88-2200	320.0	6.20	241-1400 (BE) 244-1400 (BE) 337-1200 (BE)	800
FORD EBR, EBS, EBT ECS ECT EEH, EEJ EEK EDL-2V EDM-2V EDM-4V EDM-4V EDM-4V EDM-4V	8.352+331	194 3900	120 3600	332.0 292.0 292.0 401.0 477.0 534.0	7.60 7.90 7.60 7.50 7.50	270-2300 (BE) 274-2400 (BE) 338-1900 (BE) 487-1900 (BE) 481-2150 (BE)	648 553 563 963 927 941 963	140GKB4 140GZ 140GZB4 145GKB4 145GKB4 145GZB4 WAK3 WAKB4 135GK 135GK	6-41-3x51-2 6-41-3x51-2 6-41-3x51-2 6-51-3x6 6-51-3x6 6-61-3x61-2 6-61-3x61-2 6-41-3x61-2 6-41-3x61-2	153-2800 156-2250 177-2600 170-2250 188-2600 216-2000 240-2400 250-2400 250-1800	130-2200 125-1800 136-2000 136-1800 143-2000 156-1600 178-2000 186-2000 206-1500 258-1800	451.0 525.0 525.0 554.0 779.0 779.0 817.0 1197.0	6.30 6.15 6.40 6.40 6.20 6.20 6.20 5.20	354-1200 (BE)	1325 1390 1495 1390 1390 1810 1810 1810 3056 3060
GMC 270. 3058. 305C. 351.	6-314x4 6-414x311 6-414x311 6-414x311	130-3600 150-3600 165-3800 180-3400	121-3400 127-3600 142-3800 155-3400	269.5 304.6 304.6 351.1	7.78 7.78 7.78 7.80	238-1650 (BE 286-1200 (BE 270-1400 (BE 312-1800 (BE		WILLYS L4-134 F4-134 L6-226 4-53	4-31/(x43/) 4-31/(x43/) 6-3/(x43/) 4-23/(x23/)	60 -4000 72 -4000 105 - 3800 16 - 3600	16-3600	134.2 134.2 226.2 53.5	8.48 8.90 8.86 6.50	105-2000 (BE 114-2000 (BE 190-1400 (BE 38-2250 (BE	344 390 558 128

Here's how Champion"know how" can help your fleet improve ignition performance and cut costs

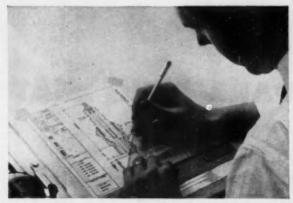


Champion representative uses versatile "Plug-Scope" to detect hidden break in spark plug cable. (Far other "Plug-Scope" uses, see Service Tips.)

Exclusive Technical Help If you have an ignition problem, a Champion representative will call, at your request, to help solve it. Working right in your shop, he'll pass along to your mechanics the latest ignition "know how" from Champion, the world's largest organ-

ization devoted exclusively to spark plugs.

To use this exclusive technical help, call your Champion representative or write to Technical Services Dept., Champion Spark Plug Company, Toledo 1, Ohio.



Specific Engine Design

Champion spark plugs are specifically designed for every make of engine and every kind of service condition. That's why you are assured of getting top power and economy when you use Champion spark plugs in all your engines.



Maximum Life

Champion's Powerfire electrode outlasts ordinary electrodes under heavy hauling conditions that push combustion chamber temperatures up into the critical ranges. That's why you get better performance longer with Champion spark plugs.



CHAMPION SPARK PLUG COMPANY TOLEDO 1, OHIO



Exclusive 5-Rib Insulator

Champion's exclusive 5-rib insulator, designed on the principle of powerline insulators, does a better job of preventing power-wasting voltage "flashover." That's why you get faster starts and longer battery life with Champion spark plugs.

CHAMPION

Service Typs

FOR CUTTING MAINTENANCE COSTS

Champion "Plug-Scope" electronically checks spark plugs right in the engine, helps track down common ignition problems





SATISFACTOR SPARK PLUGS

UNSATISFACTOR

MAKES SPARK PLUG CHECKING AS EASY AS WATCHING TVI

With just four fast connections—to battery terminals, coil or distributor, and any spark plug cable—the Champion "Plug-Scope" checks a whole set of plugs electronically, right in the engine.

"Plug-Scope" patterns are easy to read, with no interpretation required on your part. You just watch the red warning line on the "Plug-Scope" screen. If traces rise above the line, plugs need attention; if traces remain below the line, plugs are all right. It's that simple!

In addition to checking spark plugs faster than ever before, the Champion "Plug-Scope" detects reversed coil polarity, and can be used to determine available ignition voltage and help track down worn ignition components.

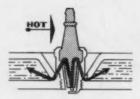
See for yourself how a Champion "Plug-Scope" can save time, reduce maintenance costs and improve engine performance for your fleet. Ask your Champion supplier for a "Plug-Scope" demonstration right away!

SPARK PLUG HEAT

ONSIDER THREE things when you select spark plugs—thread size, reach and heat range. You aren't likely to put in a plug with the wrong thread size . . . it either fits the threads or doesn't.

Reach is important since too long a plug will get hit by the piston. If it is too short you get poor ignition.

Heat range is the measure of the relative time it takes for the plug to



dissipate ignition heat through the head into the cooling system. A "cold" plug (short insulator) does it quickly. A "hot" plug (long insulator) takes longer. One reason plugs carbon-up or become deposited with soot is that they're too cold for that particular engine. On the other hand, when the plug electrodes oxidize quickly, you might be using too hot a plug.



Chart at right shows how the makers rank their plugs within each size by heat range. Between makes, the range shown is only relative and no direct comparison is possible. For example, both the AC M-8 and the Hastings 10-170 are hot plugs in their size but not necessarily to the same degree of being "hot." On the other hand, the AC M-8 is definitely a hotter plug than the AC 104.

			AC		
Thread Size Reach and Hex Size	HEAT RANGE	Automotive	Commercial	Champion	Blue Crown
10 mm ¼ in. ½ in. Hex	HOT	M-8 M-8	104 Com 103 Com	Y-8 Y-6 Y-4A	T-8 T-8 T-8 T-8 T-8
14 mm ¾ in. † in. Hex	HOT	47XL 46XL 45XL, 45XLR R-44XL	CR-45XL 44XL Com, 44XLR Com	N-18 N-8, XN-8 N-5 N-3	MT-14 MT-13 MT-12 MT-12
14 mm 34 in. †1 in. Hex	HOT	R-45XLS R-44XLS	70	N-16Y† UN-12Y†‡ N-42Y†	MT-12
14 mm 34 in. 35 throad 11 in. Hex	HOT	44N 43N	C42N	******	******
14 mm 14 in. 11 in. Hex	HOT	45F 44F 44FF		UL-18Y†: L-14 L-10 L-7 L-8	MH-16 MH-16 MH-14 MH-14
14 mm ⁷ / ₁₆ in. ¹⁸ / ₁₆ in. Hex	HOT	47L 45L 45L, 45LS 43L 43L	45L Com, C45L 45L Com, C45L 43L Com, C43L 43L Com, C43L	H-12 H-11 H-10, H-18Y† H-9, H-14Y† H-8 H-4	M-8L M-8L, M-8LX* M-8L FM-8L, FM-6LX FM-6L
14 mm 3½ in. 12 in. Hex	HOT	46S, R-46S 45S, R-45S 44S, R-44S 42S, R-42S	1 fores	J-18Y† J-12Y† J-0Y†	M-6, M-5P* FM-3
14 mm 34 in.	HOT	48, 48X 46, R-46 45, R-45 44, R-44 43, R-43 42 42	C-49 C-47 C-46 C-45 C-43, CR-43 42-5 Com C42-4 C-42, C42-1	UJ-12; J-11 J-8 J-7 J-6 J-4 J-2	M-11 M-8, M-9X* M-7 M-5, M-5X* M-5 FM-3, FM-3X* FM-3
18 mm Tapered Seat	HOT	86T, 86TS 85T, R-86T 85TS, R-85TS 84T, 84TS	84T Com C-83T	870, F-14Y† 860, F-11Y† F-10	E-9 FE-4 FE-3
18 mm ½ in. ¾ in.	HOT	88	88L Com, C-88L C-87 C-86 C-85 85R Com C-83 C-83, CR-83 C8 815 Com	10 Com D-21 D-16, UD-16; D-14 D-10 D-9 D-6	87 87 85, F-85 F-85 F-84 F-84 F-84 F-84
% in18 % in. }ቴ in. Hex	HOT	78 785 76 74	C-78L C-78L C-77 75 Com C-73	3 Com 2 Com 20 C-4 1 Com 0 Com	78 78 78 78 78 75
⅓ in. Pipe ⅓ in. Hex		26 26	112411	A-25 30	TF TF

^{*-}Power tip plugs, for overhead valve engines only.

RANGE CHART

	atotite		
Standard and Transport	Resister	Hastings	Robert Bosch
P-6 P-6	PR-6 PR-6 PR-4	10-170 10-170 10-230 10-300	U95T3 U95T3, U145T3 U145T3 U145T3 U145T3
AG-7, AG-82*, AGZ7; AG-5, AG-52* AG-42* AG-3, AG-32*	4GS-128, 4GS-150 AGR-51, 4GS-175 4GS-290, AGR-41	14-150L	W96T2 W145T2 W175T2 W225T2 W240T2
1-1	AGR-82° AGR-52° AGR-42° AGR-32	X14-189LR X14-231LR	**************************************
	2-40-1 1-2-1-1 4-1-1-1	110000 011000 011000 011000	****** ****** *****
AE-6, AE-62° AE-4, AE-42°	AER-6 AER-4	14H-161 14H-161	W96T1 W145T1 W175T1 W225T1 W240T1
AL-11 AL-0 AL-7, ATL-8, AL-82° AL-5, ATL-4, AL-52° AL-5 ATL-3	ARL-8 ARL-8, ARL-82 ARL-5 ARL-5	14-126 14-106 14-226	W125T4 W125T4
A-82° A-52° A-42° A-32°	AR-82° AR-82° AR-42° AR-32°	X14-189, X14-189R X14-189, X14-189R X14-221R X14-221R	444- 14- 14- 14- 14-
A-11, AT-10 A-11, AT-10 A-9, AT-8, AZ9; A-7, AT-8 A-6, AT-6 AT-4, AT-42* A-3, AT-3	AR-10 AR-10 AR-8, 45140, AR-80 AR-8, 45140, AR-80 AR-5, 45185, AR-51 AR-4, AR-41 AR-31, 45250	14-105, 14-106 14-105, 14-106 14-141, 14-141R 14-165, 14-166, 14-166R 14-190, 14-182 14-225, 14-226 14-226 14-228, 14-300	W145T3 W145T3 W145T3 W175T3 W175T3 W225T3 W225T3
BF-7, BF-82° BTF-6, BF-42° BTF-3	BRF-6, BRF-82° BRF-42	18-150T, X18-150T° X18-150TR* 18-170T, X18-191T*, X18-191TR* 18-170T, 18-215T*	MA96T1 MA146T1
8T-10 8T-9 8T-8, 8ZE; 8T-8 8T-8 8T-4 8T-4 8T-3	8R-10 8R-10 8R-8 8R-8 8R-8	18-105, 18-100 18-105, 18-100 18-132, 18-135 18-155, 18-156 18-156, 18-156 18-218, 18-220 18-218, 18-220 18-218, 18-220 18-218, 18-220 18-218, 18-220	M45T5 M45T5 M95T5 M95T5 M145T5 M175T5 M175T5
TT-10 TT-8 TT-8	10000	74-105 74-106 74-106 74-135 74-135 74-155 74-220 74-220	Z20T4 Z45T4 Z145T4 Z145T4
F-11 F-11	111111	*****	*****

‡-Auxiliary gap plugs.

*-Special gap for two-cycle engines.



CAN SAVE YOU HUNDREDS OF TIRE-MAINTENANCE **DOLLARS!**

For less than a penny a tire, RuGlyde can eliminate many tire failures caused by faulty mounting and demounting . . . increase tire handling efficiency . . help speed your fleets away —on schedule!

RuGlyde is THE approved lubricant for all tires—tube or tubeless—on light and heavy duty equipment. Applied to beads of tubeless tires and bead seat area of rims, RuGlyde makes the job of seating the beads on tapered rims safe and easy. Prevents scuffing—protects air seals. Also a "must" for tube and flap assemblies.



Use RuGlyde for mounting and de-mounting all tires mounting all tires
— passenger and
truck — tube and
tubeless — any
size! 100% safe
on rubber and
wheel finishes.
Also best for lubricating rub ber
parts and fittings
— and for cleaning rubber, leather and plastic.

> **Available from** your supplier.



MGM SAFETY BRAKES ARE NOW standard equipment ON THE WEST'S BIG 4

The first, perfected, positive spring-loaded parking brake . . . for trucks, tractors and trailers. Locks wheels mechanically, completely eliminates creepaway. The first, perfected fully automatic emergency brake . . . takes over instantly when air fails . . . prevents runaways even on steepest grades.

Specify MGM For Safety's Sake...The ORIGINAL Foolproof Safety Brake



TYPICAL TRAILER INSTALLATION

Air pressure supply to cylinder (1) holds springs (2) compressed in 'OFF' position. When air pressure drops, springs are released and pull connecting rod and lever (3), mechanically applying brakes. Brakes remain 'ON' until air pressure reloads

- Now standard on 9 out of 10 heavyduty trucks manufactured in the West.
- · Available for units grossing up to 300,000 lbs.
- · Complies with amended I.C.C. Safety Regulations.
- · Light weight, low cost, easy to install, minimum maintenance.

FREE Illustrated Brochure giving full details.

Also, results of tests of MGM Brakes by independent authorities, covering the most rigorous highway and off-highway conditions. Act NOW for safety's sake. Be sure your rigs are equipped with the finest, the *original*, positive parking and emergency brake.

REDWOOD HIGHWAY, CLOVERDALE, CALIFORNIA TWINBROOK 4-2700



TRANSMISSION RATIOS

	2	6		(GEAR	RATIO			#i	
TRANSMISSIONS MAKE AND MODEL	No. of Ferward Speeds	Direct Drive	Low	Second	Third	Fourth	FIFTH	Reverse	Power Take-off, Opening	TRA
CHEVROLET 3-Speed 3-Speed H, D, 4-Speed 1-Speed Powermatic (a) Hydra-Matic	3 4 5 6 4	3 3 4 5 6 4	2.94 3.17 7.06 7.41 5.296 4.71	1.68 1.75 3.58 4.05 3.81 3.03	1.00 1.00 1.71 2.40 2.69 1.56	1.00 1.48 1.936 1.00	1.00	2.94 3.76 6.78 7.85 6.042 6.11	No No L R-L R-L No	FULLER FWD Series Series
CLARK 204-V 204-V 205-V 205-V 205-V 205-V 205-V 207-V 205-V 230-F 231-F 231-F 231-F 250-V 251-V 264-V 255-V-1 267-V-1 267-V-1 267-V-1 27-V0-1 280-V 290-V 290-V 290-V 303-V 303-V 303-V 303-V 305-V 325-V 330-F 334-F 400-V 403-V 405-V For 10-speed models, se	5855444555555555555555555555555555	845444445454545454545554446655	7.58 6.06 6.06 6.35 6.35 6.35 6.06 7.86 6.06 7.86 6.06 7.86 4.08 4.08 4.77 7.00 7.00 7.20 4.83 4.83 4.83 4.83 4.84 4.83 4.83 4.84 4.83 4.83	4,38 3,50 3,36 3,36 3,36 4,38 3,50 4,38 3,50 4,38 3,50 4,38 3,50 4,48 3,93 4,48 3,93 4,48 3,93 4,48 3,93 4,48 3,83 4,48 3,83 4,48 4,48 4,48 4,4	3.05 1.80 2.40 1.91 1.71 1.73 1.80 2.40 1.80 2.40 1.80 2.34 1.90 2.34 1.90 1.80 2.34 1.90 1.80 2.34 1.90 1.80 2.34 1.90 1.80 2.34 1.90 1.90 1.90 1.90 1.90 1.90 1.90 1.90	1.72 1.00 1.48 1.00 1.00 1.00 1.00 1.00 1.47 1.18 1.00 1.48 1.00 1.54 1.00 1.00 1.00 1.42 1.62 1.62 1.63 1.64 1.64 1.65 1.65 1.65 1.65 1.65 1.65 1.65 1.65	1.00 .799 1.00 .799 1.00 .799 1.00 .86 1.00 .86 1.00 .86 1.00 .78 1.00 .80 1.00 .78 1.00 .78 1.00	7.00 7.00 7.88 7.87 6.27 7.87 7.01 8.05	RARARARARARARARARARARARAN NO.4.4.4.	SPICER 2631 5331* 3541 6241 6241 6241 6241 6241 6241 6241 62
DODGE Own PC	3 4 5	3 3 4 5 3 6	2.5 2.49 2.49 6.68 7.41 2.45 5.20	1.85 1.50 1.50 3.10 4.05 1.45 3.81	1.00 1.00 1.00 1.60 2.40 1.00 2.69	1.00 1.48 1.94	1.00		No No R R-L No R-L	4853- 5652- 5752- 5753* 5756* 5756- 5756- 5852* 5852- 5853*
FORD B9TR-7003-A B9TR-7003-B B9TR-7004-A B9TR-7004-B COTP-7000-D to G	3 3 3 3 3	33333	2.57 2.78 2.57 2.78 2.40	1.63 1.62 1.63 1.62 1.47	1.00 1.00 1.00 1.00 1.00	*****		3.13 3.38 3.13 3.38 2.0	No No No No	6352° 6352° 6352° 6352° 6452° 6452°

	pur			(BEAR I	RATIOS			*
TRANSMISSIONS MAKE AND MODEL	No. of Ferni Speeds	Direct Drive	Low	Second	Third	Fourth	FIRE	Reverse	Power Take Opening
ULLER—See page 332.									
WD Series 271 & 371 Aux Series 272 & 372 Aux	2 2	2 2	1.25 2.82	1.00	*****	******		*****	
PICER (For 12-speed mo		belo	W.)		1.00	7			Ma
2631	3	3	3.80	1.73	1.00		*****	1.00	No
3541	4	4	4.57	2.42	1.73	1.00	*****	4.07	R-L
6241	4	4	6.63	3.10	1.70	1.00	*****	7.53	R-L
6241-A	4	4	7.15	3.44	1.83	1.00	******	8.13 4.90	R-L R-L
6241-B	4	4	3.90	2.42	1.52	1.00	*****	4.43	R-L
6440	4	3	3.90	1.88	1.00	.704	*****	4.43	R-L
8041, 8045 8241, 8245	4	4	6.28	3.47	1.78	1.00	******	6.30	R-I
8440, 8445	4	3	3.67	1.88	1.00	.77		3.75	R-L
8440-A, 8445-A 3152° 3152-A°	4	3	3.67	1.85	1.00	.68	*****	3.75	R-L
3152-4.*	5	5	7.55	4.17 3.31	2.45 1.84	1.45	1.00	7.44 6.90	R-L R-L
		4	6.00	3.31	1.94	1.00	.793	5.90	R-I
3152-A* 3153* 3656*	5	5	5.42	2.70	1.50	1.26	1.00	5.28	R-L
3556-A*	5	5	7.40	3.26	2.12	1.42	1.00	8.92	RH BH
3856 * 3556-A * 4652 * 4652-A * 4652-B * 4652-C * 4752 * 4	5	5	7.40	4.27	2.47	1.46	1.00	7.84	R-L
4652-B*	8	5	7.40	4.00	2.62	1.46	1.00	7.84	R-L
4652-C* 4752* 4752-A*	5	5	7.40	4.27	1.81	1.37	1.00	7.84 6.45	R-L
4752-A°	5	5	6.10	3.52	1.81	1.35	1.00	6.46	R-L
4/02-0		-5	6.10	3.30	2.03	1.35	1.00	6.46	R-L
4752-C*	5	5 4	6.10	3.62	2.03 1.81	1.20	1.00	6.46 6.46	R-L
4753-A*	5	4	6.10	3.30	1.81	1.00	.77	6.46	R-L
4756°	5		5.51	2.98	1.84	1.23	1.00	8.84	R-L
4756-A*	5 5	5	6.50	3.18	2.12	1.46	1.00	5.84	R-L R-L
4756-C°	5	8	8.50	3.52	1.93	1.44	1.00	6.86	B-I
4852°	5	5	5.08	2.93	1.79	1.34	1.00	8.37	R-4
4853°	5	5 4	5.08	2.75	1.79	1.34	1.00	8.37	R-I
4782-C" 4783-A" 4783-A" 4785-A" 4786-A" 4786-B" 4786-C" 4882-A" 4883-A" 4883-B" 5682-B"	5	4	5.06	2.93	1.51	1.00	,76	5.37	R-1
4853-B*	5	4 5	4.51	2.44	1.50	1.00	.84	4.77	R-I
4803-8" 5602" 5632-A" 5752" 5753" 5756-B" 5756-B" 5802-A" 5802-A"	5	5	7.08	3.83	2.36	1.45	1.00	7.50	R-I R-I
5752°	5	5	6.10	3.30	2.04	1.40	1.00	8.48	R-I
8768*	5 5	4 5	6.10	3.30	1.81	1.00	1.00	6,48	R-I R-I
5756-A*	8	- 5	6.24	3.38	1.98	1.18	1.00	6.61	84
5756-B*	6	5	6.50	3.52	1.93	1.18	1.00	6.88	R-L
5852-A*	5	5	5.08	2.93	1.79	1.34	1.00	8.37 5.37	RH RH
		4	5.00	2.93	1.00	1.00	.78	5.37	8-4
5853-A*	5	4	5.06	2.93	1.51	1.00	.78	5.37	R-4
6352-A * 6352-B * 6352-C * 6480	5	5	7.31	4.09	2.41	1.44	1.00	7.33	RH
6352-B*	5	6	7.31	4.38	2.71	1.61	1.00	7.33	R-t
6352-C*	5	5	7.31	4.38	2.85	1.61	1.00	7.33	R-4
6352-C°	5	5	6.07	3.40	1.79	1.34	1.00	6.00	R-I
6452-C*	5	5	0.07	3.19	1.79	1.34	1.00	8.09	B-4
0105-0	. 9	. 9	1 0.0/	3,19	1 1.79	1.04	1.00	0.00	1 10-1

	epe		+					GI	AR R	ATIOS						itien		and one	Bujanoj	elty		PTO to I	ative leed Gear, Input PM
Model	Ne. Spe	Direct Drive In	Over Drive In	1st	2nd	3rd	4th	5th	Oth	7th	8th	9th	10th	Low Rev.	High Rev.	Ainstalla Dimensi Inches	Weight Lbs.	Control C Cent	Clutch P	Oil Capa In Pints	PTO Opening	Right	Left
CLARK 303-X 403-X 610-ED	10 10 9	10th 10th 9th		10.08 10.02 9.35	7.87 7.83 6.13	5.90 5.79 4.75	4.68 4.52 3.60	3.64 3.42 2.82	2.84 2.67 2.17	2.15 2.02 1.09	1.68 1.58 1.26	1.28 1.28 1.00	1.00	10.08 9.77 8.87	3.15	*****							
SPICER 8125	12	11th	12th	1et 10.45	2nd 8.38	3rd 6.52	4th 5.23	Sth 4.09	Forw	AT105 ard 7th 2.55		9th 1.59	10th	11th 1.00	12th .80	1st 10.45	2nd 8.36	Reverse 3rd 6.52	4th 5.28	Sth 4.09	6th 3.28	PTO Open- ing R-L	*****

a-Ratio in 6th, 1:1. b-Overdrive ratio, 0.70:1.

c—Right and left or top-mounted PTO available.
d—PTO mounts on right with adapter; top-mounted PTO
also available.
e—Also available with overdrive.

*—Transmissions synchronised. Air agest also available with Spicer synchronised units.

R—Right eide opening.

L—Left side opening.

R-L—Right and left side opening.

√ Check Your Specs

TRANSMISSION RATIOS

Continued from page 329

## PICER — Cent'0 ## 6453 *, \$455**	TRANSMISSIONS	vard	0 0u		(SEAR F	RATIOS			e-off,
6453*, 6455*. 5 4 6.07 3.40 1.79 1.00 .78 6.00 R-6653-*, 6456-* 5 5 5.06 3.06 1.79 1.00 .83 6.00 R-6652-*, 6652-*, 6652-* 6552*, 6854-* 5 5 5.06 3.06 1.79 1.33 1.00 5.10 R-6652-C* 6552-C* 5 5 5.06 3.06 1.79 1.33 1.00 5.10 R-6652-C* 6 5 5.71 3.00 1.73 1.15 1.00 5.73 R-6652-C* 6 5 5.71 3.00 1.73 1.15 1.00 5.73 R-6652-C* 6 5 5 5.71 3.00 1.73 1.15 1.00 5.73 R-6652-C* 6 5 5 5.71 3.00 1.73 1.15 1.00 5.73 R-6652-C* 6 5 5 5.71 3.00 1.73 1.15 1.00 5.73 R-6652-C* 6 5 5 5.71 3.00 1.73 1.15 1.00 5.73 R-6652-C* 6 6852-C* 5 5 5.71 3.00 1.73 1.15 1.00 5.73 R-6652-C* 6 5 5 7.71 3.00 1.73 1.15 1.00 5.73 R-6652-C* 6 852-H* 6 5 5 7.71 3.00 1.73 1.15 1.00 5.73 R-6652-C* 6 852-H* 6 852-L* 5 5 6.70 3.52 1.97 1.17 1.00 8.72 R-6652-L* 6 852-L* 5 5 6.70 3.52 1.97 1.32 1.00 5.72 R-6652-L* 6 853-A* 5 5 6.70 3.52 1.97 1.32 1.00 6.72 R-6652-L* 6 853-A* 5 5 6.70 3.52 1.97 1.32 1.00 6.72 R-6652-L* 6 853-A* 5 5 6.70 3.52 1.97 1.32 1.00 6.72 R-6653-A* 6 853-A* 5 5 6.70 3.52 1.97 1.32 1.00 6.72 R-6653-A* 6 853-A* 5 6 7 7 3.52 1.97 1.32 1.00 6.72 R-6653-A* 6 853-A* 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	MAKE AND	No. of Fors Speeds	Direct Driv	Low	Second	Third	Fourth	Fifth	Reverse	Power Take-off Opening
Auxiliaries 5831 3 2 2.00 1.00 .73 R-L 5831-A. 3 2 1.54 1.00 .73 R-L 5831-C. 3 2 1.25 1.00 .85 R-L 5831-C. 3 2 1.27 1.00 .85 R-L 5831-C. 3 2 1.27 1.00 .85 R-L 6231 85 R-L 6231 85 R-L	6852-E* 6852-F*, 6864-F* 6852-H* 6852-H* 6852-H* 6853-H* 6853-A* 6853-A* 6853-C* 6853-B* 6853-C* 6853-G*	000000000000000000000000000000000000000	45555555554444444444444	6.07 5.08 5.71 5.71 6.70 5.71 6.70 5.08 5.08 5.08 5.08 6.70 5.08 6.70 5.08	3.40 3.05 2.67 3.00 2.02 2.3.52 3.52 3.52 3.05 3.05 3.05 3.05 2.66 2.66 2.66 2.68 3.52	1.79 1.78 1.89 1.60 1.97 2.39 1.97 1.78 1.78 1.78 1.49 1.68 1.68 1.68 1.75 1.75	1.00 1.33 1.34 1.15 1.27 1.78 1.48 1.32 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	.83 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	6.00 5.10 5.73 5.73 3.61 6.72 5.73 6.72 5.10 5.10 5.10 5.10 6.72 5.10 6.72 5.10 6.73 5.10 6.72 5.10 6.73 5.10 6.73 5.10 6.73 5.10 6.73 5.10 6.73 5.10 6.73 5.10 6.73 5.10 6.73 5.10 6.73 6.73 6.73 6.73 6.73 6.73 6.73 6.73	RELECTION REPORT OF THE PROPERTY OF THE PROPER
	9831 - 9831-8 - 9831-	3333333333333333444	27 27 27 27 27 27 27 27 27 27 27 27 27 2	1.54 2.35 1.27 2.14 1.24 2.14 1.50 2.50 2.50 2.24 2.24 1.29 1.29 1.29 2.50 2.50 2.14 2.40	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	.73 .85 .85	.36 .75 .84 .75			
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FRANCHISED DISTRIBUTORS COAST TO COAST

INAILERS	COAST TO COAST
(Distributors handling only truck bo	dy or low-bed lines are so indicated.)
ALABAMA Birmingham North Alabama Tractor	Jackson Capitol Trailer & Body Co.
& Trailer Co.	MISSOURI
Bothan Felts Trailer & Equip. Co. Mobile Gulf Coast Truck & Equip. Co. Montgomery . Bach Trailer & Body Sales	Cape Girardeau
ARIZONA	Chillicothe Cooke Sales & Service
Phoenix Trucks, Inc.	Kansas City Westfall GMC Truck, Inc. Springfield Montgomery GMC Trucks, Inc.
ARKANSAS Fort Smith Shipley Motor Equip. Co. Little Rock Shipley Motor Equip. Co. Southern Equipment Co. (bodies)	MONTANA Billings Motor Power Equip. Co. Great Falls General Truck & Tractor Co.
Rerkeley Western Bus & Body Co.	Omaha, Leonard W. Begley & Sons, Inc.
Berkeley Western Bus & Body Co. Fresne Connell-Motor Truck Co. Los Angeles Eight Point Trailer Corp. Sam Leandro M & H Truck & Trailer Service	IrvingtonPeter Wendel and Son
Steckton Conneil-Motor Truck Co. Turlock Lakeside Truck Body Co.	Batavia Boyles Motor Sales
	Manhattan . B. & J. Spring & Equip. Co. Manhattan . B. & J. Spring & Equip. Co.
COLORADO BenverTitan Dorsey Trailer Sales	Batavia Boyles Motor Sales Brooklyn B. & J. Spring & Equip. Co. Manhattan B. & J. Spring & Equip. Co. Mineela B. & J. Spring & Equip. Co. Massau. Cronin Truck Body & Equip., Inc. Yonkers Safeway Motor Service & Sales (Low-beds)
NartferdEquipment Service Inc.	NORTH CAROLINA
DISTRICT OF COLUMBIA Washington	Charlotte Southern Equip. Service Co. Wilson Simpson Equip. Corp.
FLORIDA Jacksonville Rivers Trailer & Equip. Inc.	Mandan O.K. Equipment, Inc.
Florida Equip. Co. (Low-beds)	Cincinnati Dorsey Trailer Sales
Miami Howe E. Moredock & Co. Florida Equip. Co. (Low-beds) Orlando Orlando White Trucks Inc. Florida Equip. Co. (Low-beds) Tampa Rivers Body Tampa, Inc.	
Tampa Rivers Body Tampa, Inc. Florida Equip. Co. (Low-beds) West Palm Beach Faircloth Truck &	Columbus . Weaver Trailer & Body Co. Dayton . Dayton Commercial Equip., Inc. Dever
West Palm Beach Faircloth Truck & Tractor Co., Inc.	Body Corp. Elyria Papenbrock Sales & Service Toledo Associates Truck & Trailer Co.
GEORGIA	OKLAHOMA
GEORGIA Atlanta Posey & Linn, Inc. Bill Jones Motors Macon Johnson Trailer & Equip. Co. Savannah Coastal White Truck Co.	Oklahoma City Truck & Trailer Sales, Inc. Boardman Machinery Co. (Low-beds) OREGON
IDAHO	Portland Beall Dorsey Trailer Sales of the Northwest
Beise Boise Kenworth-Dorsey Co. Twin Fails	BENNEYI VANIA
HIIMOIS	Allentown
Chillicathe Koch Motor Sales Decatur Glatz Truck Service Springfield Arrow Trailer & Equip.	Allentown Erie Phelps Coal Company Forty Fort, Wilkes Barre Valley White Truck Company Narrisburg Osterlund, Ind. New Bethlehem Stew's Truck &
INDIANA	New Bethlehem Stew's Truck & Trailer Sales
INDIANA Evansville Hocker Power Brake Co. Fort Wayne Bowlin-Gaff Car Rental, Inc. Indianapelis H & H Trailer Sales South Bend Schwalm Trailer Co.	New Castle Bailey Sales & Service, Inc. Philadelphia. Edwin Coane Trailer Sales York Roosevelt Garage, Inc. Truck Both & Fruin Sales (Bodies)
IOWA	Truck Body & Equip. Sales (Bodies) RHODE ISLAND
Des Meines Wood Diamond T Sales, Inc. Hampton . Murphy Truck & Trailer Sales Sieux City Sieux City Trailer Sales, Inc.	Providence Tractors, Inc. (Low Bed) SOUTH CAROLINA
Sioux City Sioux City Trailer Sales, Inc. KANSAS	Charleston Southern Truck Co., Inc.
WichitaSchlegel's Garage	Nashville Matlock & Cope
Lexington Wilson Machinery Co.	memphismatiock & Cope
(Low-beds) Leuisville Manning & Shipley, Inc. Wilson Machinery Co. (Low-beds)	Fort Worth. W. T. Hobbs Grand Prairie American Body & Equipment Co. (Bodies)
LOUISIANA	Houston Houston Trailer and Truck Body, Inc.
Baten Reuge Massart Supply Lake Charles Massart Supply LaFayette Massart Supply Shrevepert Daniels Truck-Trailers, inc.	San Antonio Commercial Body Corp.
MARYLAND	Salt Lake City Titan Dorsey Trailer
Baltimore Edwin Coane Trailer Sales Ellicott City Fed-er-Line Truck Bodies, Inc. (Bodies)	Sales & Service VERMONT Hardwick Barcomb's Motor Sales, Inc.
MASSACHUSETTS MedfordNew England Trailer &	VIRGINIA
Body Mfg. Co. Pesco Equipment Corp. (Low-beds)	RichmendCrenshaw Equipment Co. WASHINGTON
MICHIGAN Betreit Earle Equipment Co. (Low-beds)	Spekane . Spokane Dorsey Trailer Sales
Acro Transportation, Inc. (Bodies) Mudsenville	WEST VIRGINIA Charlesten Motor Truck Sales, Inc. Huntington Carroll Equipment, Inc. Wheeling West Virginia-Ohlo Motos Sales, Inc.
************	Salae Inc.

WISCONSIN
Madison Dorsey Trailer Sales of Madison
Milwaukee . . . Brake and Equip. Co., Inc.



Outside-Skin Model HALT Outside-Post Model HEPT 2,247 cu. ft. 2,260 cu. ft. Wt. 9,900 lbs. Wt. 9,450 lbs.

A nose assembly that just won't break down heads a list of special engineering features that make both straight floor Hi-Cubes outstanding for strength as well as



Aluminum Satellite

Model DALT Wt. 8,950 lbs. Fully-stressed monocoque design, special heat-treated aluminum alloys.



Champion II

Model DCT Wt. 9,660 lbs. Rugged full-width upper fifth wheel plate, 10" radius corners and one-piece aluminum roof head a list of quality features on this all-new van.



Champion Series Vans

The combination of stressed skin with X-braced side structure makes this popular Dorsey line outstanding for strength, ruggedness and low weight. Available in dry freight, insulated and grain models.



Atlas

Model DIPT Wt. 10,130 lbs. Economy and durability of steel in a trailer lighter than most aluminum vans.



Super Cube Furniture Van Model FCD

Drop center axle model with 2,605 cu. ft. Inside width: 91½"; inside height: 98 to 125". Standard models also available.



Satellite Produce Van

Model SALT

Features new "Strate-Flo Chilling" for maximum produce protection.



Satellite Refrigerator Van

Model RALT

Monocoque construction and "assembly-line insulation" combine for outstanding performance.



Midwest Special Livestock Van

Engineered for maximum livestock protection. Converts easily to dry freight van. Drop deck models also available.



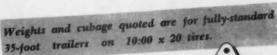
Aluminum Grain Trailer

Model GEPT Wt. 8,190 lbs. Stress-relieved front corners, top and bottom rails special extrusions. Also available in bulk fruit and exterior-skin models.



Giant Platform Model DGT

With its 18" main frame, the Giant is the strongest, lightest platform in the industry. Grain - tight plywood body and livestock extension also available.



The exact weight of every Dorsey is stamped on this weight tag...





DORSEY TRAILERS / ELBA, ALABAMA

A Subsidiary of the Dorsey Corporation



SALES-SERVICE

*								GE	AR R	ATIOS						ation		ter ward note	Heusing	Capacity		PTO to It	Gea nput
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here's an inside story to every EIS Master Cylinder . . . a cast of 'characters' made up of precision-engineered brake parts ... MANUFACTURED, 100% INSPECTED AND ASSEMBLED BY BRAKE EXPERTS with only one purpose . . . to play their parts perfectly!

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3RD AXLES & TRAILER SUSPENSIONS

	Notes	with Max. Extension,	Size	TRIB	DIS- UTION		AXL	E DATA		88	AKES	(Standard)		-	ber	
THIRD AXLE MAKE AND MODEL and Truck Model Adapted to	Capacity (Lb.) See Explanatory P	Weight (Lh.) with Tires, Frame Exte Etc.	Maximum Tire Si	(First or com appl cente secon	NGE t figure bination les to r axie; d figure rd axie)	Make	Туре	Size	Axte Specing (In.) (with seax, three)	Make and Type	Drum Material	Brake Diameter and Width	Lining Area	Number of Points Frame Support	Spring Size or Nur Leaves Added	Spindle Diameter (at linner bearing)
1	2	3	4	8	6	7	8		10	11	12	13	14	15	16	17
Trailing Axles FABCO (Trailing and Pusher) 1250H (All makes). 1250M (All makes). 7-1000 (All makes).	14000 14000 18000	940**	9.00/20 9.00/20 11.00/22	56-44 56-44 56-44	Var Var Var	Var Var Var	TTT	41/4 41/4 8	481/2 481/2 Var	H M Var	CA GA Var	15x4 16½x5 Var	254 325 Var	2 2 2	53x23/2 53x23/2 Var	2 1 k 2 k Var
FRUEHAUF TONNAGE MASTER			11.00/22 11.00/22	50-50 50-50	*******	Frue Frue	I T	31/4×45/6	Var Var	Tim Tim	Var Var	16½x7 16½x7	440 440	2 2	Var Var	31/2 31/2
HUTCHENS** H-100T (truck & trailer) H-200T (truck & trailer) H-700T (truck & trailer) H-700T (truck & trailer) H-700T (truck & trailer) H-800 (trailer)		949** 782** 680** 715** 850**	11.00/22 11.00/22 11.00/22 11.00/22 11.00/22	50-50 50-50 50-50 50-50 50-50	52-48 54-46 54-46 54-46 50-60	Var Var Var Var	Var Var Var Var	Var Var Var Var	50 50 49 49 48	Var Var Var Var	Var Var Var Var	Var Var Var Var	Var Var Var Var	6 6 6 2	43% 43% x3 42% x3 42% x3 61% x5	*****
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NEWAY TA-800-A (Trailing) ATA-832 (Trailing Adj.) ATA-834 (Trailing Adj.) P-100 (Pusher) P-200 (Pusher) PR-200 (Pusher)	16000 16000 22000 36000 27000 27000	340°° 375°° 590°° 595°°	11.00/22 11.00/22 11.00/22 11.00/22	40-60 40-60 40-60 40-60	50-50 50-50 50-50 50-50 24 24	Var Var Var Var Var	Var Var Var Var Var	Var Var Var Var Var	48-50 48-50 48-50 48-50 48-50	Var Var Var Var Var Var	Var Var Var Var Var	Var Var Var Var Var	Var Var Var Var Var	4 4 4 4 4	***********	Var Var Var Var Var
REYCO 17214-1 (For any 1½-3 ton truck) 21218-1 (For any 3½-5 ton truck) 21218-4 (For any 3½-5 ton truck) 17222-1 (For trucks over 5 tons)		815** 800**	11.00/22	50-50 50-50 50-50 80-50	52-48 52-48 52-48 52-48	Var Var Var	Var Var Var	Var Var Var Var	50% 61 51 50%	Var Var Var Var	Var Var Var	Var Var Var Var	Var Var Var	6 6	43½x3 43½x3 43½x3 43½x3	
SUPER LOAD BOOSTER (Pusher) *** LB26 (C, D, F, V, 1½ & 2 ton) LB30 (Pord F700 & F750) LB30 (D, V, 1½ & 2 ton) LB34 (D, F, V, 3 ton) LB40 (D, F, V, 3 ton)	13000 18000 15000 17000 20000	2820 2820 3280	8.25/20 9.00/20 9.00/20 10.00/20 11.00/20	50-50 50-50 50-50 50-50 50-50	*******	Own Own Own Own Own	TTTTT	41/6 5 41/6 6	48 48 48 48 48	VH VH VH or A VH or A	CA CA CA CA	15x4 15x5 15x4 16x5 16x6	251 345 251 345 370	2 2 2 2 2	48x3½ 48x3½ 48x3½ 48x3½ 48x3½	294 314 3 314 334
TANDEM TRAC (Pusher) F-PD Light trucks F-PD Medium trucks F-PD Medium trucks F-PD Heavy trucks F-PD Heavy trucks.	14000 14000 14000	1130** 1130** 1130**	9.00/20	38-62 38-62 38-62 38-62 38-62	50-50 50-50 50-50 50-50 50-50	Var Var Var Var	TTTTTT	41/6 41/6 41/6 5	50 50 50 50 50	H H MA H	CA CA CA CA	15x4 16x5 16½x5 16x6 163½x5	236 315 380 315 380	2 2 2 2 2	(e) (e) (e) (e)	23 fg 23 fg 23 fg 23 fg 33 fg 33 fg
TANDEM TRAC (Trailing Axies) F-DT Light trucks F-DT Medium trucks F-DT Medium trucks F-DT Heavy trucks F-DT Heavy trucks	14000 14000 14000 18000	1130** 1130** 1130**	9.00/20 9.00/20 10.00/20	62-38 62-38 62-38 62-38 62-38	50-50 50-50 50-50 60-50 50-50	Var Var Var Var	TTTTTT	416 416 416 5	50 50 50 50	H H MA H	GA GA GA GA	15x4 16x6 1634x5 16x5 164x5	236 315 390 315 380	2 2 2 2 2	(9)	236 236 236 236 334 334
TRUCKSTELL (Pusher) Hydro-Trac Single Tire* Chief-Ton Single Tire* Hydro-Trac Dual Tire Chief-Ton Dual Tire Chief-Ton Dual Tire Chief-Ton Dual Tire Hydro-Trac Dual Tire Chief-Ton Dual Tire Chief-Ton Dual Tire	1100 1100 1400 1400 1800 1800 2000	0 665+ 0 545+ 0 680+ 0 680+ 0 680+ 0 680+	11.00/20 11.00/20 9.00/20 9.00/20 10.00/20 11.00/20 11.00/20	65-35 65-35 50-50 50-50 50-50 50-50	80-20h 65-35 60-40h 55-45 60-40h 55-45 00-40h 55-45	Var Var Var Var Var Var	T T T T T T T T T T T T T T T T T T T	41/21 41/21 41/21 5n 5n 5n	50 50 50 50 50 50 50 50	Var Var Var Var Var Var Var	Var Var Var Var Var Var	Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var	4 4 4 4 4 4	28x3½k 28x3¼k 28x3¼k 28x3¼k 28x3¼k 28x3¼k 28x3¼k 28x3¼k 28x3¼k	Var Var Var Var Var Var

Column 3

Weight of third axle unit, unless otherwise noted, includes all accessories and maximum tires.

*—Does not include axle.

*—Without frames, wheels, axles, etc.

*—Does not include axle, but include with transfer system and radius rods where applicable.

*—Does not include axle, but include with transfer system and radius rods where applicable.

*—Does not include axle, but include with transfer system and radius rods where applicable.

*—Does not include axle, but include we wish radius rods where applicable.

*—Does not include axle, but include we wish radius rods where applicable.

*—Does not include axle, but include we wish radius rods where applicable.

*(a)—Available with 7.50/20, 8.25/20, or 10.00/20 or 10.00/22 or 11.00/20 maximum tire size.

*(b)—Available with 10.00/20, or 10.00/22 or 11.00/22 maximum tire size.

*(d)—Available with 11.00/20 or 11.00/22 maximum tire size.

*(e)—Available with 11.00/20 or 11.00/22 maximum tire size.

*(d)—Available with 11.00/20 or 11.00/22 maximum tire size.

*(e)—Available with 11.00/20 or 11.00/22 maximum tire size.

Chev-Chevrolet Shu-Shuler C-Cast Iron

D-Driving
Re-Rectangular
SF-Standard Forge

Tim-Timken

Column 8
Sr—Solid round
lar
Sq—Souare
T—Tubular

d Forge

Column 11

C—Chevrolet
F—Ford
ie V—Vacuum Power
I W—Westinghouse
ical —Own or Westinghouse optional

Column 12 CA—Cast Alloy Iron

*:-On application.

(a)—Long slip-spline joint supplied for drive axle in place of radius rods.

(b)—52/4 x 513/4.

(e)—Tandem Trac provides suspension for both axles with a new type of two-stage proportional springing with ample range from no-load to overload conditions.

(h)—Available with hand or electric caboperated hydraulic pump for transferring axle load for added traction or for raising axle clear of ground.

Var-Various (1)-A-1614x514

Column 14-Attachment unit only.

	Notes	Max.	.	LOAD	DIS-		AXLE	DATA		BRA	KES	(Standard)		8	4	1
THIRD AXLE MAKE AND MODEL and Truck Medel Adapted to	Capacity (Lb.) See Explanatory No	Weight (Lb.) with Max. Tires, Frame Extension Etc.	Maximum Tire Size	(First or comb appli center second	NGE t figure abination lies to grants;	Axie Spacing (in.) (with max. thee)	Make and Type	Drum Material	Brake Diameter and Width	Lining Area	Number of Points Frame Support	Spring Size or Nu Leaves Added	Spindle Diameter (at inner bearing)			
1	2	3	4	5		7	8	9	10	11	12	13	14	15	16	17
Trailing Axles—cont'd TRUCKSTELL (Trailing Axle) Hydre-Trac Dual Tire. Chief-Ton Dual Tire. Chief-Trac Dual Tire. Chief-Ton Dual Tire. Chief-Trac Dual Tire. Chief-Trac Dual Tire. Chief-Ton Dual Tire.	18000	490° 605° 490° 605°	9.00/20 9.00/20 10.00/20 10.00/20 11.00/20 11.00/20	50-50 50-50 50-50 80-50 80-50 80-50	60-40h 55-45 00-40h 55-45	Var Var Var Var Var	T T T T T T T T T T T T T T T T T T T	41/6 41/6 5 8 8	50 50 50 50 50 50 50	Var Var Var Var Var Var	Var Var Var Var Var	Var Var Var Var Var	Var Var Var Var Var	4 4 4 4 4 4	28x314k 28x314k 28x314k 28x314k 28x314k 28x314k	Var Var Var Var Var
TRUCKTOR (x) U. N. (Universal heavy duty) UN-14 UN-18. UN-20	18000 14000 18000 20000	1900 2100	11.00/20 9.00/20 11.00/20 11.00/24	50-50 50-50 50-50 50-50	*******	Var Var Var Var	TTTTT	\$ 41/6 8	80 49 80 82	WAM Var Var Var	GA Var Var Var	163-jx6 Var Var Var	451 Var Var Var	6 6 6	40x3 44x23-5 44x3 44x3	21/6 23/6 33/4 35/6
UTILITY 25. 30. 35. 35. 308. 355. 31	20500 16500 20500	2080 2825 2410 2920	8.25/20 10.00/20 11.00/24 10.00/20 11.00/24 11.90/22	65-45 55-45 55-45 55-45 55-45 55-45	67-33 67-33 67-33 67-33 67-33	Own Own Own Own Own Var	Sq Sq Sq Sq T	23/4 3 33/4 3 33/4 5	41 44 50 44 80 Ver	HV or A HV or A HV or A HV or A V or A	GA GA GA GA GA	16x3½ 16x5 17x8 16x5 17x6 16½x7	230 300 420 300 420 454	4 4 4 4 4	None None None 40x3 40x3 None	234 294 3 254 3 334
Driving Axles FABCO 1550 (Ford, Chevrolet) 1550 (All other makes) 2000 (F300, F900 Ford) 2000 (F800, Ghod)	15000	2600 3200 3600	9.00/20 9.00/20 10.00/20 10.00/20 11.00/20	50-50 50-50 50-50 50-50 50-50	*******	Ford Match Ford Ford Match	00000	ARCS & & & & & & & & & & & & & & & & & & &	481/3 481/3 481/3 481/3 481/3	FH Match FH H or A H or A	GA GA GA GA	16x5 Match 15x5 16x5 Var	312 Var 312 Var Var	2 2 2 2 2	63x21/2 63x21/2 56x3 56x3	3 Var 3 3 Var
THORNTON DRIVE A2C30 Chevrolet 2 ten A8D30 Dedge FA, HA, JA A2 Varieus. A2F30 Ford F500 & F600. A8F38 Ford F700 & F750 A6 Varieus. A8D38. A15F41 Ford F800 A15 Varieus. A14F41 Ford F800 A14 Varieus. A14F41 Ford F800	1300 1300 1500 1500 1500 1700 1700	0 3300 0 3300 0 3300 0 3600 0 3600 0 3700 0 3700 0 3800	8.25/20 8.25/20 8.25/20 8.25/20 8.00/20 8.00/20 10.00/20 10.00/20 10.00/20 10.00/20	50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50	*******	Eat Dodge Eat Ford Eat Eat Eat Ford Eat Ford	000000000000	43-6 43-6 43-6 43-6 43-6 53-6 53-6 53-6 53-6	8254 48 48 48 5254 5254 5254 5254 5254	VH VH VH VH VH VH or A VH or A VH or A	GA GA GA GA GA GA GA GA	15x4 16x3 15x4 15x4 15x4 16x3 16x5 16x5 16x5	251 251 251 251 251 251 251 251 345 345 345	2222222222222	48x2 9 48x2 9	3 218 256 256 256 256 256 256 256 256 256 256
TRUCKSTELL 300 Ford F800. 300 Ford F800. 300 Chavrolet 300 Dodge B4J 400 Ford F700 & F780 400 Dodge B4R 500 Ford F800. 500 Chavrolet 90 & 1000 500 Chavrolet 90 & 1000 500 Dodge B4T 500 Dodge B4T	1100 1300 1300 1350 1500 1500 1500 1700	7400 7800 7800 7800 7800 0 7800 0 9200	8.25/20 8.25/20 8.25/20 8.25/20 8.00/20 9.00/20 9.00/20 10.00/20 10.00/20 10.00/20	50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50		Ford Ford Chev. Dodge Ford Dodge Dodge Ford Chev. Dodge Ford	000000000000000000000000000000000000000	315 31/6 316 41/4 41/6 Re Re Re Re Re Re Re Re Re	50 50 50 50 50 50 50 50 50 50	VFH VFH VCH VDH VFH VDH VFH or A VFH or A VFH or A	CA CA CA CA CA CA CA CA CA CA	14½x3½ 15x4 15x4 15x4 15x5 16½x3½ 16x5(1) 16x5(1) 16x5(2) 16x6(3)	251 252 312 252	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	85x234 05x234 65x234 05x234 05x234 00x3 00x3 00x3 00x3 00x3 00x3 00x3	256 256 256 3 3 334 334
Trailer Suspensions HUTCHENS H-100S (All makes) †† H-200S (All makes) †† H-200S (All makes) †† H-200S (All makes) †† H-200S (All makes) †† H-300S (All makes) †† H-700S (All makes) †† H-700SUS (All makes) †† H-700SUS (All makes) †† H-700T (All makes) H-200 (All makes) H-200 (All makes) H-200 (All makes) H-300 (All makes)	1800 1800 2100 1800 1800 1800 2100	0 350° 0 434° 0 362° 1230° 334° 0 334° 0 413° 1046° 0 715° 0 850 10 850 10 810	* 11.00/22 * 11.00/22 * 11.00/22 * 11.00/22 * 11.00/22 * 11.00/22 * 11.00/22	50-50 50-50 50-50 30-50 50-50 50-50 50-50		. Var	Var Var Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var Var Var	50 68 48 48 48 48	Var Var Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var Var Var	4 4 4 4 4 4 8 8 2 2 2 2 2 2 2 2 2 2 2 2	43%x3 43%x3 43%x3 43%x3 43%x3 42%x3 42%x3 42%x3 42%x3 61%x8 61%x8 61%x8 61%x8	
NEWAY RTS-218 (single axle) RTS-222 (single axle) SL-618 (single axle) SL-625 (single axle) SL-625 (single axle) SL-722 (single axle) SL-725 (single axle) SL-725 (single axle) SL-725 (single axle) SL-725 (single axle) RTS-500-A (trailer tandem) RTS-500-A (trailer tandem) RTS (D)-500-A (trailer tandem) RTS-500-A-64 (trailer tandem) RTS-500-A-64 (trailer tandem) RTS-500-A-(D)-44 (trailer tandem) TL-644-A (4-spring tandem) TL-646-A (4-spring tandem) 428†† (2-spring tandem)	2200 1800 2500 2500 1800 2500 3600 4400 3600 4400 3600 4400 3600 4400 3600 4400 3600 4500	335°00 3365°00 3665°00 430°00 4605°00 5655°00 5755°00 5665°00 5655°00 6605°000	Var Var Var Var Var Var Var Var Var 11.00/24 11.00/24 11.00/24 11.00/24 10.00/20 10.00/20 10.00/20 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24 11.00/24	50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50	Var Var Var Var Var Var Var Var Var Var	Var	Var Var Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var Var Var	301-6 503-6 44 44 44 44 503-6 503-6 44	Var Var Var	Var Var Var Var Var Var Var Var Var Var	Var	Var Var Var Var Var Var Var Var Var Var	4 4 4 4 4 4 4 4 4 8 8 8 8 2		Var

Continued on Page 336

		Max. nelon,		LOAD	TION		AXLE	DATA		BRAI	KES (Standard)		8	Number	
MAKE AND MODEL	Capacity (Lh.) See Explanatory Notes	Weight (Lb) with Tires, Frame Extente.	Maximum Tire Size	(First is applied to third	fgure ination is to axie; figure	Make	Туре	Size	Axie Spacing (In.) (with max. tires)	Make and Type	Drum Material	Brake Diameter and Width	Lining Area	Number of Points Frame Support	Spring Size or Nu Leaves Added	Spindle Diameter
1	2	3	4	8		7	8	9	10	11	12	13	14	16	10	17
railer Suspensions—co	ontin	ued														
WAY—(Centinused) 3291 (2-enring tandem). 329	36000 42000 42000 50000 60000 38000 38000 38000 38000 38000 38000 38000 10000 10000 150000 54000 50000 600000 6000000	1045** 1260** 1170** 1390** 1300** 1400** 2300** 3800**	11.00/22 11.00/22 11.00/22 Var Var Var Var Var Var 11.00/24 10.00/20	50-60 50-50 50 50-50 50 50-50 50 50-50 50 50-50 50 50-50 50 50-50 50 50 50-50 50 50 50 50 50 50 50 50 50 50 50 50 5		Var	Var Var Var Var Var Var Var Var Var Var	Var	48 48 48 501-2 501-2 501-2 501-4 523-2 501-4 523-4 74 110 128 Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var Var	Var	Var	Var	222222224444222224444488884442		Va V
EYCO 30116-1 (Single) 30118-3 (Single) 17114-1 er 3 (Single) 17114-1 er 3 (Single) 17118-1 er 3 (Single) 17118-1 US (Single for Low Bey) 17120-1 er 3 (Single) 17120-2 (Single) 17214-1 (Tandem) 17218-1 (Challenge Yandem) 17218-1 (Raycolastic Bearing) 17218-2 (Raycolastic Bearing) 17218-1 (Single Tandem) 17218-1 (Single Tandem) 17218-1 (Single Tandem) 17218-1 (Tandem) 17218-1 (Tandem) 17218-1 (Tandem) 17222-1 (Havey Duty Tandem) 17222-1 (Havey Duty Tandem) 17218-1 (Tand. LgBoy 127-74 in.) 17218-1 (Champion Tandem) 17218-1 (Tandem) 17218-1 (Tandem) 17218-1 or 3 (Tri-Axle) 17318-1 or 3 (Tri-Axle)	14000 18000 18000 22000 25000 36000 36000 36000 36000 36000 36000 36000 36000 36000 36000 36000 36000 36000	337°°° 415°° 415°° 404°° 517°° 5816°° 849°° 6849°° 6849°° 682°°	11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22 11.00/22	50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50	*******	Var Var Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var Var Var	50% 51 51 51 51 51 51 51 51 51 51 60% 63 64 63 64 64 64 64 64 64 64 64 64 64 64 64 64	Var	Var Var Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var Var Var	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	42/4x3 42/4x3 43/4x3	000000000000000000000000000000000000000
NX WHEELS INC. 2-18. 2-18. 2-16. 2-16. 2-16. 2-18. 3-20. 3-20. 3-20. 3-20. 3-20. 3-20. 3-20. 3-20. 3-20.	2806 2800 2800 3200 3200 3800 3800 5000	0 2300 0 2300 0 2300 0 2450 0 2450 0 2800 0 2850 0 2850 0 2850	8.25/20 9.00/20 10.00/20 9.00/20 10.00/22 10.00/22 10.00/22 11.00/22 11.00/23	50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50 50-50		. Var	T T T T T T T T T T T T T T T T T T T	414 414 414 414 5 5 5 5	45 45 45 45 45 48 48 48 48	Var Var Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var Var	Var Var Var Var Var Var Var Var	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	45x3\2 45x3\2 45x3\2 45x3\2 45x3\2 48x3\2 48x3\2 48x3\2 48x3\2 48x3\2	
SUPER LOAD BOOSTER	. 3400	10		. 50-00	******	. Var	Var	Var	48	Var	Var	Var	Var	2	48x33/g	-
F-TT (All makes)	3800	1130	11.00/22	50-50		. Var	Var	Var	50	MA or VA	CA	Var	Var	2	(y)	
TRUCTOR T-16 (Single) T-20 (Single) T-20 (Single) TT-26 (Single) TT-16 (Tandem) TT-18 (Tandem) TT-16 (Tandem air suspension) TT-18 (Tandem air suspension) TT-18 (Tandem air suspension)	2000 2500 3200 3800 3800	00 00 00 00	11.00/20	50-50 50-50 50-50 50-50 50-50		Tim Tim Own Ti Tim Tim Tim Tim Tim Tim	T T SR-T T T T T T T T T T T T T T T T T T T	5 51/2 6 5 5 5 5	50 50 50 50 1083/2	MA MA MA MA MA MA MA	GA GA GA GA GA GA	1634x7 1847 1847 1634x6 1634x6 1634x6 1634x8	812 450 450 438 438 438 438 438	4 8 8 Ge	56 56 58 45½ 45½ in eral Air eral Air 45½	Spi Spi

CHECK YOUR KNOW HOW

TRAINING

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MAINTENANCE FILMS FOR MECHANIC TRAINING

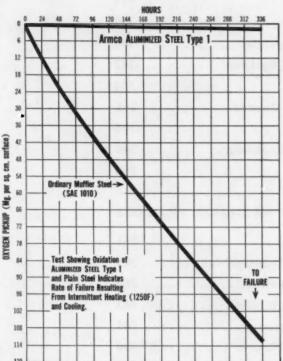
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SECTION 5

BEAT "BURN-OUT" with mufflers of ARMCO

ALUMINIZED STEEL

Searing heat literally "burns out" mufflers of ordinary carbon steel. But Armco Aluminized Steel withstands muffler operating temperatures because a tight, heat-resisting alloy layer forms on the surface of this special hot-dip aluminum-coated steel.



New steels are born at Armco

The graph is evidence

In the test on which the graph is based, samples of ordinary low carbon steel and Armco Aluminized Steel were heated to 1250 F, and cooled intermittently, to approach conditions in hard-working truck mufflers. The results are convincing.

Because burning is oxidation, the rate at which a metal picks up oxygen indicates how fast it will fail. The graph shows that Armco Aluminized Steel resists oxidation at high temperatures, while ordinary muffler steel moves rapidly toward failure.

Actual service records give solid evidence, too. One fleet reports that mufflers of Armco Aluminized Steel on 140 diesel tractors averaged more than four times the life of carbon steel mufflers previously used.

If you would like more information about advantages or availability of long-lasting mufflers made of Armco Aluminized Steel, just write Armco Steel Corporation, 1570 Curtis Street, Middletown, Ohio.

ARMCO STEEL



Armco Division • Sheffield Division • The National Supply Company • Armco Drainage & Metal Products, Inc. • The Armco International Corporation • Union Wire Rope Corporation

MAINTENANCE TRAINING MANUALS

MECHANIC TRAINING does pay off. This is a fact. One low cost way to have well trained mechanics is to give them good maintenance literature.

The editors of COMMERCIAL CAR JOURNAL have completely revised the listings shown on this and the following pages. The brief descriptions of manuals, folders, charts and booklets cover a variety of specific subjects which you can use in your fleet's mechanic training program. Many of the publications are provided free of charge. Some of the more complete publications are offered at a nominal charge. The addresses of the manufacturers are given after the description for your convenience in ordering.

Every effort has been made to select a broad enough listing that you'll be able to choose the right manual for your fleet operation. A word of warning, however, some manufacturers have told us that the old standbys which have been popular through the years are in limited supply and are offered on a first come, first served basis. The listings are arranged under the following headings so you can find specific information quickly:

Subject	Begins on p	p
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Clutches, Transmission	ns 340	
Cooling Systems	341	
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Axles, Springs and Wheels

Eaton handbooks—up-to-date bulletins containing maintenance and service procedures on Eaton axles, two-speed axles with electric, air, or vacuum shift controls, service data on single and tandem drive axles and single and double reduction axles. When writing, request information desired and Model No. of unit. Free—Sales Promotion Manager, Axle Div., Eaton Mfg. Co., 739 E. 140th St., Cleveland 10, Ohio.

Serviceman's Guide, Causes and Prevention of Axle Shaft Failures explains how to prevent axle "weariness failures" and how to spot troubles before they start. Free— U. S. Axle Co. Inc., Water St., Pottstown, Pa.

Rockwell-Standard Field Maintenance Manuals — various manuals showing assembly, lubrication, maintenance and brake service on Rockwell-Standard axles. Include Model No. and information desired when writing. Free—Technical Publications Manager, Service Engineering Dept., Transmission and Axle Div., Rockwell-Standard Corp., Detroit 32, Mich.

Rockwell-Standard Wall Chart shows adjustments and assembly of Rockwell-Standard hypoid-helical twospeed, double reduction drive units. Illustrated. Free—address as above.

Truck Rim Identification and Operating Manual — shows the various types of truck wheel rims and dual wheel construction. Tire mounting and demounting instructions are included. There is a special section on rim accidents. Free—from Members of The National Wheel and Rim Assn. For name of closest member, write the Assn. at 208 W. St. Clair Ave., Cleveland 13, Ohio.

V-Belt Drive Service Manual—a 20-pg manual on installation and maintenance procedures on V-belt drives for tandem axles. Free—Tandem V-Drive Dept., Dayton Industrial Products, 2001 Janice St., Melrose Park, Ill.

Axle Lubrication Manual (Rock-well-Standard Corp., Field Maintenance Manual No. 1)—has lube specs and applications for all Rockwell-Standard axles. Free—Technical Publications Dept., Transmission and Axle Div., Rockwell-Standard Corp., Detroit 32, Mich.

Wheel, Tire and Rim Mounting—bulletin showing correct procedure and sequence for mounting tire and rim over cast spoke wheel. Free—Erie Malleable Iron Co., Automotive Wheel Div., Erie, Pa.

Imperial Automotive Handbook for Power Steering—a 24-pg booklet on replacement and maintenance of power steering lines. Booklet No. 3016-A. Free—The Imperial Brass Mfg. Co., 6300 W. Howard St., Chicago 48, Ill.

Wheel and Steering Alignment Technical Manual—complete data on front end geometry and wheel and steering alignment. \$2.00 each—John Bean Div., Food Machinery and Chemical Corp., P. O. Box 9490, Lansing 4, Mich.

Brakes

Fundamentals of Brakes, Compressed Air and Compressed Air Brakes, No. 5060A — complete and well illustrated. Easy to understand language on operation of air brakes. Free—Sales Promotion Dept., Bendix-Westinghouse Automotive Air Brake Co., Elyria, Ohio.

Air Brakes, Operation and Maintenance, No. 5057—wall chart with operation maintenance and troubleshooting data on air brakes. Fully illustrated. Free—address as above.

Grey-Rock Brake Service Manual—64 pages—description of parts and operation of major brake systems and makes. Includes assembly, service and maintenance procedures for brakes and related components. Each \$3.00—Advertising Dept., Grey-Rock Div., Raybestos-Manhattan Inc., Manheim, Pa.

Raybestos Brake Service Guide—72 pages—over 100 photographs and sketches showing adjustment, relining and troubleshooting procedure for all popular American-made cars. Price \$2.00—Advertising Dept., Raybestos Div., Raybestos-Manhattan Inc., Bridgeport 2, Conn.

Raybestos Brake Service Guide for Fleets — 43 pages — comprehensive, well illustrated manual on brake service on all type brakes. Has a special section on air system maintenance. Free—address as above.

Fleet Brake Troubleshooting Card

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(TURN TO NEXT PAGE, PLEASE)

Maintenance Manuals

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Brake Service—30 pages—modern brake data for latest fundamentals, operating principles and adjustments for brakes and related components. Troubleshooting data included. Free— The Russell Mfg. Co., Middletown, Conn.

Wagner Hydraulic Brake Service Guide, No. HU-411—8 pages—an outline for use in hydraulic brake service and repair, including a trouble-shooting guide. Free—Sales Promotion Manager, Wagner Electric Corp., Automotive Div., 6400 Plymouth Ave., St. Louis 14, Mo.

Warner Electric Brake Service Manual—complete description of operation, maintenance and installation of Warner Electric Brakes System. Illustrations show assembly and trouble-shooting procedures. Free—Warner Electric Brake and Clutch Co., Beloit, Wis.

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Standard Hydraulic and Power Brake Service Manual—320 pages, illustrated—covers all makes of hydraulic brakes. Shows adjustments, service and relining procedures, has a troubleshooting guide. \$7.50—The Paul-Marsh Co., 520 W. Fort St., Detroit 26, Mich.

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Chilton's Standard Hydraulic and Power Brake Service Manual—320 pages, illustrated—a picture story manual completely covering standard hydraulic brakes for all cars and light trucks from 1950 through 1959. Includes fundamentals, troubleshooting, adjustments and overhauling information. Also covers power brake service procedures for Bendix, Moraine, Kelsey-Hayes and Midland \$7.50 each—Chilton Co., Book Div., 56th & Chestnut St., Phila. 39, Pa.

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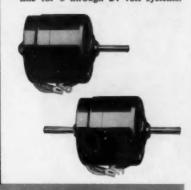


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Maintenance Manuals

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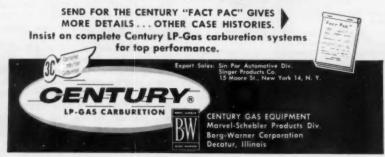


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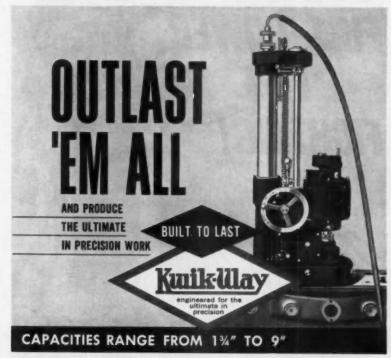
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Maintenance Manuals

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Div., 56th and Chestnut Sts., Phila. 39, Pa.

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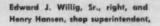
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Maintenance Manuals

Continued from Page 345

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Lubricating Oils for Cummins Engines, Bulletin No. 14—gives complete specifications and quality requirements for all kinds of diesel engines in various types of service. Free—Cummins Engine Co., Inc., Columbus, Ind.

Diesel Fuel for Cummins Diesels, Bulletin No. 5—gives recommended fuel oil specifications for all Cummins' diesels. Fuel selection suggestions are included. Free—address as above.

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Maintenance Manuals

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Recommended Practices for Lubricating Automotive Front Wheel Bearings-15 pages-gives complete details and pictures of service and maintenance requirements of front wheel bearings. Single copies, 25¢ each-National Lubricating Grease Council, 4638 J. C. Nichols Pkwy., Kansas City 12, Mo.

Truck Tire Selection and Care-a guide from the Armstrong Rubber Co. on how to choose the right tire for your job, plus tips on proper tire maintenance and mounting and driving. Illustrated, with charts and tables. Free-The Armstrong Rubber Co., West Haven 16, Conn.

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How to Get the Most Service from Off-the-Highway Tires - 40 pages tells how to get longer off-highway tire life through proper care, service, maintenance and operation. Free-address as above.

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Tire Mounting Safety, Wall Charta two-color chart showing safety tips and correct procedures for mounting tubeless tires. Free-address as above.

Tools and Procedures

Truck Trailer Docks-shows design recommendations for truck - trailer loading docks, as compiled by 'the Truck-Trailer Manufacturers' Assn. The 12-pg. booklet gives minimum dimensions for new loading docks, as well as height, length and width requirements and recommended parking facilities. 50¢ each - Truck - Trailer Manufacturers Assn., Inc., 710 Albee Bldg., Washington 5, D. C.

Trailer PM Practices-compiled by the Truck-Trailer Manufacturers Assn. covers routine trailer PM, ICC inspection and maintenance requirements, etc. 35¢ each-address as above.

Fruehauf Cleaning, Brightening and Protecting Program - 11-pg booklet explains uses of brighteners and corrosion removers for restoring bright surfaces to trailers. Procedures, types of cleaners and factory recommendations are included. Free-Fruehauf Trailer Co., 10940 Harper Ave., Detroit 32, Mich.

(TURN TO PAGE 350, PLEASE)

SIMPLICITY in the Heart of the Modern Diesel Engine

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Maintenance Manuals

Continued from Page 348

Heli-Coil Inserts, Bulletin No. 652—tells how to salvage parts for threads that are stripped. Use of stainless steel wire thread inserts restores to original dimensions most thread sizes used in automotive applications. Free—Heli-Coil Corp., Danbury, Conn.

OTC Tool and Application Bulletins—literature covering special tools for use on various makes of off-highway equipment, crawler tractors, hydraulic shop presses hand tools and wrenches. Each bulletin shows application of specific tool concerned and "how-to-do-it." Free—specify make and model of equipment and your fleet name—Owatonna Tool Co., Owatonna, Minn.

Ditzler Repaint Manual—a 44-pg, authoritative manual on the repair and maintenance of finishes on cars and trucks. Subject matter includes care and operation of equipment, how to spray automobile finishes, preparing the surface, priming, color matching, lacquer finish, refinishing schedules, etc. A detailed section on general painting instruction also instructs on truck lettering. Ask for Form No. 5899, single copies free—Ditzler Color Div., Pittsburgh Plate Glass Co., 8000 W. Chicago Ave., Detroit 4, Mich., Attn., Sales Prom. Mgr.

Color Safety Guide—a four-page folder—showing proper color schemes and patterns you should consider in your fleet color program for safety. Ask for Form No. 5951, free—address as above.

Ditzler General Painting Instructions, Form No. 5853—a four-page bulletin giving proper methods for refinishing cars and trucks with lacquer or enamel finishing systems. Sections include removing old finish, metal panels and their preparation, suggestions for use of metal conditioner and rust inhibitor, preparation of old finish, priming wood surfaces, etc. Free—address as above.

Welding Techniques

Safety in Welding and Cutting—a 50-pg booklet covering recommended safety procedures in all types of welding and cutting. Each \$2—American Welding Society Inc., 33 W. 39th St., New York 18, N. Y.

Fundamentals of Welding — 560 pages—covers all basic welding prob-

lems, very comprehensive. \$9 each—address as above.

Safe Practices for Welding and Cutting Containers That Have Held Combustibles—a manual about welding of fuel tanks or other tanks which might explode because of having held combustibles. Safety procedures are spelled out. Each \$1—address as above.

Soldering Manual—a complete reference and thorough text on everything a mechanic needs to know about soldering. 21 chapters, \$5 each—address as above.

Arc Welding Training Manual—a complete, illustrated text especially written for welder training. Covers all processes and procedures, types of equipment and welding rods. \$3 each—address as above.

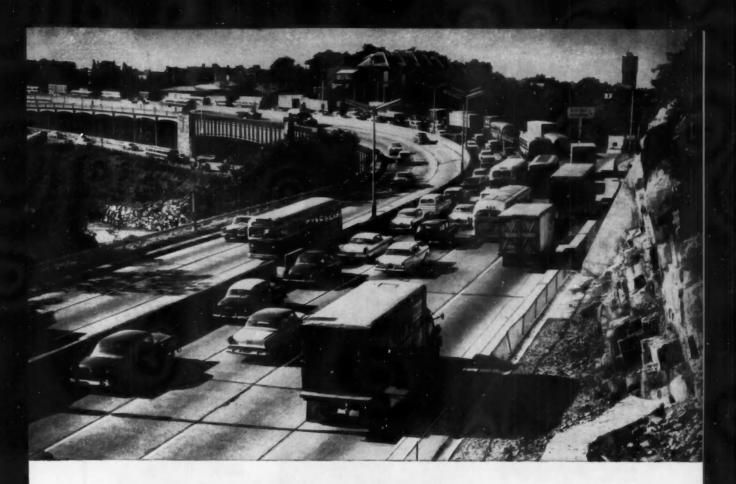
Welding Maintenance Data Book—144 pages, revised—includes application data, uses, characteristics, definitions, etc., on virtually all of the 200 special eutectic "low temperature welding alloys." Free loan—Eutectic Welding Alloys Corp., 40-40 172nd St., Flushing 58, N. Y.

Arc Welding—44 pages, illustrated—a simplified instruction manual for learning arc welding. Describes techniques and applications of the process and discusses selecting, designing, and planning welded projects. Each 50¢—The Lincoln Electric Company, 22801 St. Clair Ave., Cleveland 17, Ohio.

Procedure Handbook of Arc Welding Design and Practice—11th edition, 1300 pages, illustrated—a revised authoritative handbook on all phases of arc welding. Presents modern procedures, electro selection and use and application of manual and automatic welding equipment. Each \$3—address as above.

Metals and How to Weld Them—322 pages, illustrated — a reference book explaining the internal structure and physical properties of metals, outlining welding procedures and discussing welding problems. Each \$2—The James F. Lincoln Arc Welding Foundation, P.O. Box 3035, Cleveland 17, Ohio.

Basic Information for Manual Hard Surfacing—Bulletin 3100.1, 12 pages, illustrated—discussion of hard surfacing, stressing proper job analysis and electrode selection. A good reference for welders in off-highway fleets concerned with track and roller build-up. Free—The Lincoln Electric Company, 22801 St. Clair Ave., Cleveland 17, Ohio.



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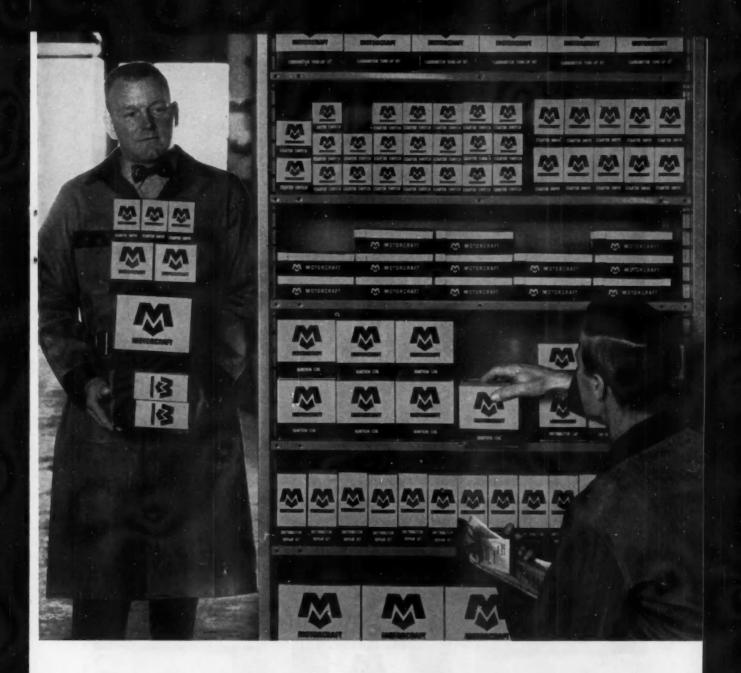






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\$-7	of Your	213	90"	66"	62"
58-L	Choice	272	96"	74"	66"

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M12-H	Chassis	444	144"	74"	72"
MV-12	of	575	144"	881/2"	78"
MV-14	Your	671	168"	881/2"	78"
MV-16	Cheice	767	192"	881/2"	78"
MV-18		862	216"	881/2"	78"

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3ULLETIN

Tires made with Tyrex® Cord give 16.8% better mileage than nylon in recently completed truck tire tests

- In carefully controlled tests to measure tread wear and growth, nylon tires and tires made with TY-REX tire cord were run over five million tire miles on overloaded 50,000-pound trucks.
- Tests were conducted by <u>Automotive</u> <u>Research Associates</u> in <u>Texas desert country</u> where tire temperatures up to 230°F. were recorded.
- . Only standard tires, now available

from dealer's shelves, were used. Tires were examined at regular intervals to determine rate of wear.

- At conclusion of test, tread wear measurements showed that tires containing TYREX cord had 16.8% more tread life left than nylon.
- Results of tests also showed that tires with nylon had 33% more growth than the tires made with TYREX tire cord. Consequently, tires containing TYREX cord proved better for dual mounting.

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466

DIESEL GASOLINE BUTANE ENGINES

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MAINTENANCE TRAINING FILMS

THE FOLLOWING list of training films is specifically selected for maintenance training for mechanics in truck, bus, car and construction fleets. They make excellent supplements to other instructions, can save you time and money in the long run. The film list has been revised and updated through February 1960.

Most of the films listed here are available without cost—you pay only transportation and insurance. A few carry a nominal rental charge. If your fleet does not own its own projector, you can usually rent one in most cities at low cost. Because the demand is often high, film should be ordered as far in advance as possible.

Following the title of each film is the running time, a brief description of the film, whether it's free loan, or rental. All films in this list are 16 mm sound film unless otherwise indicated. They should never be shown in silent type projectors, as it will destroy the sound track.

The number at the end of each description shows from whom the film is available. Please refer to the source list starting on page 364.

The training films have been divided into eight sections for your convenience:

Subject	Begins on	pag
Brakes	361	
Clutches, Transmissio	on 361	
Electrical, Ignition	361	
Engines	361	
Cooling Systems	362	
Fuels, Lubricants	362	
Tools & Procedures	362	
Welding Techniques	363	
SOURCE LIST	364	

Brakes

Air Brakes, Operation and Maintenance, Part 1—24 min.—truck and tractor air brakes systems. Free loan —1.

Air Brakes, Operation and Maintenance, Part 2—21 min.—trailer air brakes. Free loan—1.

Total Brake Service With Raybestos — technical, sound and color. Shows brake work done on 16 actual cars, not models. Covers complete major and minor adjustment procedures as well as troubleshooting, brakes and power brakes systems. Free loan—2.

Thermoid Brake Service—30 min., color—features latest methods of brake servicing. It covers hydraulic systems, drum conditioning, brake lining installation, hydraulic brake adjustments. Free loan—17.

Heavy Duty Brake Service with Raybestos—1 hour—a technical film on troubleshooting brake systems on all types of trucks. Free loan—2.

Clutches and Transmissions

R-1150 RoadRanger Transmission— 20 min., color—operation and construction of the Fuller R-1150 Road-Ranger. Free loan—3.

RoadRanger Transmissions, R-46, R-96, R-960 and R-1550 — 29 min., sound and color—Free loan—3.

Fullair Control — 20 min., color — operation and maintenance on Fuller's air shift control used on some Road-Ranger transmissions. Free loan—3.

Electrical and Ignition Systems

Ignition Engineered—35 min.—describes operation and function of the ignition system in internal combustion engines. Free loan—4.

The Story of the Modern Storage Battery—32 min., color—covers the modern automotive battery from its invention to present day use in guided missiles. Free loan—16, Rent—9.

Battery Ignition and Electrical System—26 min.—how to check and service the battery, starter motor and generator. Also, how to check lightning circuits, low tension wiring, and voltage and current regulator. Rent—9.

The Story of a Spark Plug—34 min.
— shows functions and parts of a spark plug. Rent—9.

Troubleshooting Problems, Ignition
—19 min.—shows how to troubleshoot

the ignition system when engine fails to start, runs rough, won't give full power etc. Rent—9.

Johnnie Plug Check—30 min., color—shows procedure for checking spark plugs. Free loan—4.

Ignition and Spark Plugs—19 min.—first part shows relationship of the spark plug to the ignition system; second part shows the correct method of removing, testing, cleaning and installing spark plugs. Free loan—5.

Story of a Spark Plug—33 min. how to install plugs properly, causes of poor performance. Also includes spark plug manufacturing. Free loan —5, 6.

Story of the Storage Battery—32 min.—shows principle, operation and use of the storage battery. Also covers battery manufacturing. Free loan —6.

Engines

ABC of Internal Combustion—13 min.—an animated motion picture explaining in simple language how air, fuel and ignition work together to create power. Free loan—7.

ABC of the Automobile Engine—18 min.—an animated film explaining in graphic detail the parts and the workings of the modern automobile engine, a follow-up film to "The ABC of Internal Combustion." Free loan—7, Rent—9.

ABC of the Diesel Engine—18 min.—the fundamentals of the operation of a diesel engine and examples of its use in industry and transportation. A follow-up film to the "ABC of Internal Combustion." Free loan—7, Rent 9.

Diesel, The Modern Power—21 min.—shows both 4 and 2 cycle engines. Assembly and function of each part is explained. Free loan—6, 7, Rent—9.

Where Mileage Begins—19 min. animated film showing gasoline engine operation, tells what happens when gears are shifted. As engine is assembled, functions of parts are explained. Free loan—7.

(TURN TO NEXT PAGE, PLEASE)

Maintenance Films

Continued from Page 361

Troubleshooting Problems, Fuel Induction-16 min.-shows how to find what system of the engine is at fault. A troubleshooting guide for such complaints as no power, rough running, overheating. Rent-9.

Diesel Engine-9 min. shows six processes in the diesel engine cycle showing the motion of the piston in the cylinder. Factors effecting diesel engine efficiency are also discussed. Rent-9.

Down The Gasoline Trail-8 min.an animated drop of gasoline is pictured step-by-step as it proceeds through the fuel system from the time it enters the gas tank 'til it goes out the exhaust pipe. Rent-9.

Cooling Systems

The Cooling System-9 min., color -shows construction and function of the cooling system and its various parts including water pump, radiator thermostat, hoses and pressure cap. Effects of maintenance neglect such as rust and scale formation are shown. Free loan-8.

You Ought to Drain Your Auto in the Autumn-6 min.-shows what can happen to automotive cooling systems if anti-freeze is not drained and cooling system flushed in the autumn. Free loan-8.

Rising Tide-17 min.-cooling system maintenance and care. Free loan

Fuels and Lubricants

Oil Films in Action-18 min,-technical film in color showing effect of oil in bearing life. Free loan-7.

Lubrication-30 min.-shows theory of friction, application of lubricants in a motor vehicle. Free loan-6.

The Why of Automobile Lubrication -24 min., color-explains why lubrication is necessary. Free loan-6.

Story of Lubricating Oil-20 min.an animated film showing how lubricating oil is produced and refined for modern automotive requirements. Rent-9.

Tools and Procedures

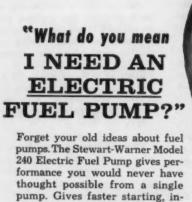
Around the Corner-9 min.-explains operation of the automotive differential, how it works. Elementary. Rent-9.

Cutting Threads with Taps and Dies-19 min.-shows and explains the principles and operations of cutting small threads using hand taps and dies. Rent-9.

Fundamentals of Filing-11 min.how to care for, handle, and clean files. Also, selection of different files for various metals. Rent-9.

How to Run a Lathe: Metal Working Lathe-20 min., color-a basic introduction to the standard back-geared screw cutting lathe. Shows each principal lathe part, its purpose and operation. Suited for beginners. Rent-

How to Run a Lathe: Plain Turning - 20 min., color - shows all operations involved in the machining of a shaft held between centers. Teaches many of the basic procedures followed in all lathe work such as measuring with calipers and micrometers, locat-



creased performance, no surges. starving or lag. Eliminates vapor lock. Model 240A **Outperforms all others**

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ing and drilling center holes, etc. Rent-9.

ABC of Hand Tools—36 min., color—Part 1 shows use and care of basic tools such as hammers, screwdriver, pliers and wrench. Part 2 shows proper use of file, saw, chisel, plane and punch. Free—7, Rent—9.

Wrenches—20 min.—explains types and uses of various wrenches, shows damage which can result from incorrect use. Free—10, Rent—9.

Hand Tool Series: Punches, drifts and Bars—14 min.—shows correct use of the above mentioned tools. Free— 10.

Pulling for Profits—20 min.—shows basic fundamentals of the NoSPIN differential, and how it operates. Free loan—11.

Simply Awful Or Awfully Simple—20 min., color—correct procedure for mounting and demounting tubeless tires including 14 and 15 in. rims. Free loan—12.

How to Machine Aluminum — 32 min.—outlines use of hand and machine tools used to machine aluminum. Free loan—6, Rent—9.

How to Rivet Aluminum—27 min.—complete instructions on preparing rivet holes, fastening the joints, and heating rivets under controlled temperature. Free loan—6, Rent—9.

School Bus Operation, Part 1, Bus Care and Maintenance—13 min.—shows points to be checked in daily and weekly PM of school buses. Free loan—13.

Use and Care of Hammers—11 min.—shows proper use for various types of hammers such as claw, ball peen, and action hazards to be avoided in their use. Free loan—10.

Automotive Wheel Bearings—a four part sound slide film in full color—covers ball and roller wheel bearings showing care and handling, wheel bearing adjustments, inspection procedures. Free loan—15.

Welding Techniques

New Welding Procedures—19 min., color—gives step-by-step procedures on welding rod and electro techniques. Both torch and metallic arc welding are shown, also chamfering, cutting, grooving. Free loan—14.

A Story of Arc Welding—24 min., color—shows theory and techniques of arc welding. Many automotive scenes are included. Free loan—6.

Welding—22 min.—Introduces welding tools and equipment, shows correct method to get a flame and how each of the three types flames can be obtained. A good basic introduction to acetylene welding. Rent—9.

Welding Operator—11 min.—covers both oxyacetylene and arc welding showing the problems involved with equipment, necessary knowledge and physical requirements of the operator, etc. Rent—9.

Story of Arc Welding — 24 min., color—shows applications of arc welding in many different industries including automotive. Good close-ups show process of arc welding including electrical circuitry and types of welding joints. Rent—9.

SOURCE LIST for the training films listed here starts on the next page.



SOURCE LIST

NUMBERS refered to at the end of the description of each film are listed here showing the company you can write to, to get the film you desire. Where more than one source is given, write to the closest address.

 Bendix Westinghouse Automotive Air Brake Co.
 901 Cleveland Rd.
 Elyria, Ohio

- Adv. Dept.
 Raybestos-Manhattan, Inc.
 Bridgeport 2, Conn.
- Fuller Mfg. Co.
 Transmission Div.

 Service Sales Dept.
 Kalamazoo, Mich.
- Electric Autolite Co. Advertising Dept. Toledo 4, Ohio
- Champion Spark Plug Co. Sales Dept. Toledo 1, Ohio

- U. S. Bureau of Mines Graphic Services Station 4800 Forbes St. Pittsburgh 13, Pa.
- 7. General Motors Corp. Dept. of Public Relations Film Section

New York and Long Island 1775 Broadway New York 19, N. Y.

Eastern States General Motors Bldg. Detroit 2, Mich.

Western States 508 San Francisco Bank Bldg. 405 Montgomery St. San Francisco 4, Cal.

- Union Carbide Consumer Products
 Co.
 Div. of Union Carbide Corp.
 East 42nd St.
 New York 17, N. Y.
- Univ. of Illinois
 Audio-Visual Aids Service
 Div. of Univ. Extension
 Champaign, Ill.
- Proto Tool Co.
 2209 Santa Fe Ave.
 Los Angeles 58, Cal.
- Detroit Automotive Products Corp.
 8701 Grinnel Ave.
 Detroit 13, Mich.
- American Grease Stick Co. Muskegon, Mich.
- Univ. of Kansas Bureau of Visual Instruction Lawrence, Kan.
- Eutectic Welding Alloys Corp. 40-40 172nd St. Flushing 58, N. Y.
- Federal-Mogul Service
 11031 Shoemaker
 Detroit 13, Mich.
- 16. Willard Sales, The Automotive
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 Co.
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 Trenton 6, N. J.

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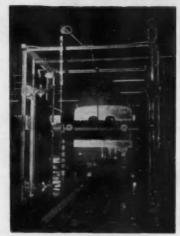
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Eclipse Machine Division Elmira, New York



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It is the best looking pickup...with the greatest driver comfort

These are strong statements—but check them yourself against the pictures here, the specifications, and the price your Studebaker dealer quotes you!

The ½ Ton Champ (5000 and 5200 lbs. G.V.W.) and the ¾ Ton Champ (7000 lbs. G.V.W.) both start with a frame of extremely high section modulus. Springs, axles, brakes, clutch and transmissions are all heavy-duty, built for severe service. (Springs are double-duty: you get an easy ride without a load, but extra leaves cushion the road-shock when you're loaded.)

All 4 engine choices are built for heavy duty, with silichrome exhaust valves, polished valve stems, pressure-lubricated tappets, and other quality features. Choose a Six or V-8, from 90 to 210 horsepower—all with high torque at low rpm. And you have 4 heavy duty transmissions to select from.

Yet the Champ is handsome to look at, a pleasure to ride in and drive. That sleek, trim cab has abundant room for three people; it is upholstered throughout in soft, durable vinyl, with an insulated roof; the exclusive full-width rear window has an optional slide-open feature giving you unexcelled ventilation and full visibility.

The Champ handles like a snappy convertible. And you'll like it all the better if you add Studebaker's no-slip Twin Traction rear axle—and the exclusive Hill-Holder which keeps you from rolling backward when you start up a grade.

Call on your Studebaker dealer this week, and put the Champ through its paces! He'll be glad to hand you the keys.









CHAMP SPECIFICATIONS

		ENERA	L			ENGINE	8		(all Sync	ItSSIONS thromesh utomotic)		EAR AXLE RATIOS	REAR SPRINGS	(See F	RES notrates)				
Medel	Maximum G.V.W.	Heminal Rating (tens)	Wheel-	Body Length and Type?	No. Cyl.	Cu. in. Displ.	Brake Hersepower	Maximum Torque	Standard	Optional	\$16.	Optional		Tubeless	w/Tubes				
			112"	61/2' Pickup					3-Speed	-	4.27	4.55	2 Stage-Std.						
SES 5,0	5,000	1/2	122"	8' Pickup 8' Platform 8' Stake	6	170	90 er 4000	145 at 2000	-	4-Speed Overdrive	4.27	4.55	2 Stage H.D. Optional	4 PR-P 7.10-15 4 PR-P-W&B	6.00-16 4 PR-P 7.10-15 4 PR-P-W&B				
-		1	112"	61/2' Pickup		245 118 = 34		0 204 # 1400	3-Speed	Overaring	4.09	4.27/4.55/3.73	2 Stage - Std. 2 Stage H.D.						
566 5,200	5,200	1/2	122"	8' Pickup 8' Platform	6		118 @ 3400		-	4-Speed	4.09	4.27/4.55/3.73							
			122	8' Platform 8' Stake					-	Overdrive	4.27	4.09/4.55	Optional	6.00-16 6 PR-P	6.00-18 6 PR-P				
			112"	61/2" Pickup					3-Speed	*	4.09	4.27/4.55/3.73			6.50-18 6 PR-P				
567	5,200	1/2		8' Pickup	VB	259 Std.	180 @ 4500	260 € 2800	-	4-Speed	4.09	4.27/4.55/3.73	2 Stage-Std.	6.50-16	6.50-16				
	-	-	122"	8' Platform 8' Stake	VB	289 Opt.	210 er 4500	300 @ 2800	-	Overdrive	4.27	4.09/4.55	2 Stage H D, Optional	6 PR	6 FR				
									-	Automatic	3.73	4.09/4.27							
		34	34 122"	8' Pickup					3-Speed		4.10	4.88	2 Stage-Std.						
5E11	7,000			122"	122~	122~	8' Platform 8' Stake	6	245	118 ∉ 3400	204 @ 1400	-	4-Speed	4.10	4.85	2 Stage H.D.			
										-	Overdrive	4.88	4.10	Optional	7.00-16*	7.00-16			
		36	34 1994	34 122"	122"	122"	122"						3-Speed	-	4,10	4.88		6 PR-P	6 PR
5612	7,000							1000	8' Pickup 8' Platform	VB	259 Std.	180 @ 4500	280 @ 2800	-	4-Speed	4.10	4.88	2 StageStd.	8-17.5 8 PR
3616	7,000		-14					8' Stake	V.	289 Opt.	210 @ 4500	300 ∉ 2800	-	Overdrive	4.68	4.10	2 Stage H.D. Optional		
													-	Automatic	4.10		1		

Ask your Studebaker dealer about his Transtar trucks—1 Ton to 2 Tons HD (9,000 to 23,000 lbs. G.V.W.)



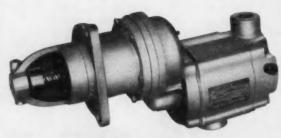
the Champ by Studebaker

It's tougher than the job!

Studebaker-Packard Corporation, South Bend 27, Indiana

SI ASH 988888 Jeeee 89 Sees with new R

AIR STARTING MOTORS



SIZE 10BM HEAVY DUTY

Modern I-R Air Starting Motors can pay for themselves in one year through savings in battery replacements alone. They eliminate the expense and trouble of high capacity generators and banks of heavy storage batteries. They weigh less, take up less space than electric starters. They also produce surer, faster starts and are unaffected by extreme weather conditions.

Choose from I-R's complete line of modern, compact Air Starting Motors (from 300 cu. in. to over 9000 cu. in. diesel and to over 20,000 cu. in. gas or gasoline). Write for details, today.

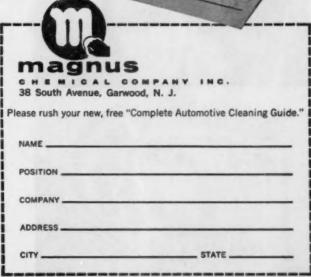
Ingersoll-Rand



PARTIAL CONTENTS:

Engine & Chassis Cleaning Desludging **Parts Cleaning Hot Tank Cleaners Cold Tank Cleaners Radiator Cleaners Automotive Cleaning Equipment Preventative Maintenance Appearance Reconditioning** Refinishing **Shop Maintenance** Paints & Finishes

> **Automotive Maintenance** Materials . Methods . Machines

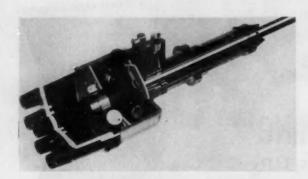


FOR YOUR PROTECTION, MAGNUS PRODUCTS ARE AVAILABLE ONLY FROM OUR OWN EXPERIENCED AUTOMOTIVE SALES-SERVICE REPRESENTATIVES.



PRODUCTS

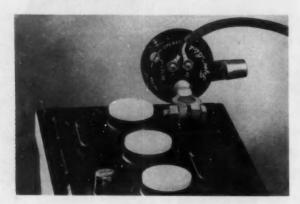
For quick information about new products you're interested in, phone or write the person named directly below the description



Rotovance Distributor

is for heavy-duty service in most types of engines. It's designed to give ever 100,000 miles of major maintenance-free service, according to the manufacturer. Centrifugal weight and diaphragm components are combined and the breaker plate is made stationary so that all timing advances result from cam rotation.

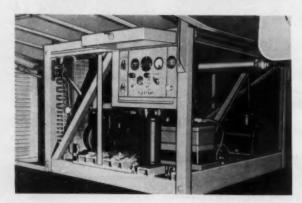
Contact Mr. Yale Shepard, Adv. Dir., Holley Carburetor Co., 11955 E. 9 Mile Rd., Warren, Mich. Phone: JEfferson 6-1900.



Fyre-Blok

is a new device which stops battery power to the engine through the generator instantly if vehicle is tilted beyond its center of gravity. When a vehicle overturns, a short circuit can ignite gasoline. With Fyre-Blok installed as shown, tilting causes break in contact between the battery and both the electrical system and the generator. To restore contact, Fyre-Blok must be reset by hand. A magnetic valve, used with this device, stops the flow of fuel to the engine in case of overturn.

Contact Mr. Paul M. Brown, Pres., Paul Brown Fyre-Blok Sales, Inc., Chesapeake, Ohio. Phone: 7-2224.



Trailer Refrigeration Unit

is for under-slung mounting. Features include light-weight construction; twin thermostatically controlled refrigeration systems, which operate independently of each other for deuble cargo protection; 25-hp air-cooled engine; electric compressor clutches, which allow the engine to start unloaded with one battery; single switch to change from cooling to heating cycle; both automatic and manual defrost; twin high pressure blower wheels which give uniform temperature and prevent cargo drying.

Contact Mr. Ralph Lowensohn, Flex-Temp Div., General Equipment & Sales, Inc., 1348-54 Stadium Drive, Indianapolis, Ind.

Two-Stage Dry-Type Air Filters

are for heavy-duty gasoline and diesel engines, according to the manufacturer. Purolator says its two-stage air filter has two separate elements in one housing. If one is damaged, the other gives needed protection. The "extra fine" type elements are rated from 450 to 1150 cfm with low initial restriction. The first stage element can be removed for cleaning or replacement without disturbing the second stage element. This gives extra protection since the engine's air intake remains sealed off.

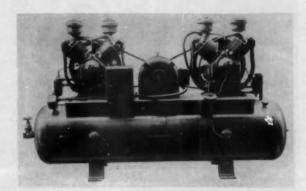
Contact Purolator Products, Inc., 970 New Brunswick Ave., Rahway, N. J.



New Shop Air Compressors

are from Champion Pneumatic. Both the 15-hp Model No. OE-36-15 and the 20-hp Model No. OE-36-20 have two Model No. RE-36 pumps driven by a single motor. Other features are 120-gal tanks and magnetic starters on compressors. The 15-hp unit delivers 76 cfm at 100 psi and 63.4 cfm at 200 psi. The 20-hp unit's delivery is 96 cfm at 100 psi and 80 cfm at 200 psi.

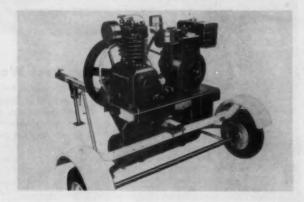
Contact Mr. Roger Steele, Asst. Sales Mgr., Champion Pneumatic Machinery Co., Princeton, Ill. Phone: 3-1215.



Portable Air Compressor

is compact yet delivers 15 cfm at 80-lb pressure and 13½ cfm at 125-lb pressure, enough for airless spray painting or any large maintenance job. Features include: 2-cyl, single stage pumps; forced air cooling; ball bearing construction; automatic, measured feed oiling; and adjustable, automatic unloader for normal or high pressure operation. It's mounted on a sturdy, lightweight boat-type trailer. The 513-lb unit is 82½ in. long, 66 in. wide and 45½ in. high.

Contact Mr. Homer A. Lange, Adv. Mgr., The DeVilbiss Co., Toledo 1, Ohio. Phone: GReenwood 4-5411.

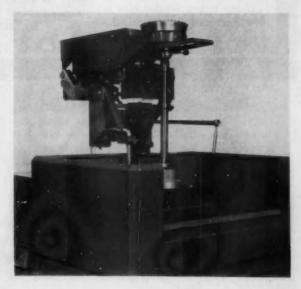


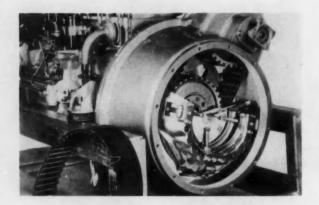
Cylinder Boring Bar

is said to give fast set-up and accurate boring. The Sunnen "Cylinder King" completes a V-8 block in as little as 33 min. It includes set-up, ridge removal, stock removal within .002 in. of desired oversize, finish honing to final size, gaging and removing block from machine. If a badly worn block wen't clean up, no extra set-up is needed to hone to the next desired oversize. The honing tool takes alignment from the original unworn portion of the cylinder. This permits resizing to a minimum standard oversize.

Contact Mr. A. Del Pico, Asst. Sales Mgr., Sunnen Products Co., 7910 Manchester Ave., St. Louis 17, Mo. Phone: STerling 1-2100.

(TURN TO NEXT PAGE, PLEASE)





Belt-Drive Flywheel PTO

Ready-mix and dump trucks by White Motor Co., Cleveland, Ohio., have this belt-drive flywheel PTO. Photo shows the belt drive from cog pulley on the rear of the crankshaft ahead of the flywheel sending power to another cog pulley in the flywheel housing. Extra belt at lower left shows belt design.

New Products

Continued from Page 371

Tire Valves

are self-vulcanizing. They do away with vulcanizing when replacing valves, making it an easier job. They're for all types of vehicles. Can be hot-plate vulcanized if desired.

Contact A. Schrader's Son Div., Scovill Mfg. Co., 470 Vanderbilt Ave., Brooklyn, New York.

Screw Sockets

have hollow heads for driving %, 9/16 and %-in. Allen-type set screws. They're for all large industrial applications.

Contact Mr. Jay Womak, Adv. Mgr., Proto Tool Co., 2209 Santa Fe Ave., Los Angeles 54, Cal.

Mechanical Knowledge

can be tested to help eliminate error in hiring, placing and promoting personnel. Mechanical Knowledge Test No. 6-A measures mental ability, personal adjustability to job situations, and specific job aptitudes and abilities.

Also available is a personnel file folder which includes a standard employment application. It gives a compact, permanent data file on job applicants and employees. Fits standard correspondence file drawers.

Contact Mr. Fred M. Schmidt, Sales Prom. Mgr., Aptitests, 31 S. Carpenter Ave., Indiana, Pa. Phone: HOpkins 5-4541.

Truck Washing System

uses automatic chemical spray action. The new Thermadraulic unit is a drive-through type with wands to cut individual sprays on and off as truck is driven through the wash bay. Features include instant heated spray wash, 500-psi spray application and an aluminum cleaning formula that has no caustics or acids. Three stages of the system are a hot pre-soak spray, hot cleaning spray and final pressure rinse.

Contact Mr. Robert Massler, Vice Pres., Sprayaway Corp. of America, P. O. Box 1102, Tulsa, Okla. Phone: LU 4-4193.

Tune-up Kit

includes cam-angle tachometer, combination power timing light, voltamptester and cylinder compression



testing unit, all in handy steel carrying cabinet.

Contact Mr. Ralph Mansfield, Auto-Test, Inc., 600 S. Michigan Ave., Chicago 5, Ill. Phone: WAbash 2-5459.

Solderless Terminals

are known as the "Avikrimp" style by ETC, Inc. The new electrical terminals are reinforced by a seamless, heat-toughened, tin-plated brass sleeve that's permanently attached (TURN TO PAGE 374, PLEASE)



All Purpose Tank

A double conical tank, with 7000-gal single compartment, is from Fruehauf Trailer Co., Detroit. It's used to haul crude oil and distillate for Scurlock Oil Co., Houston, Texas. Conical design causes oil to lay above the outlet and maintain head pressure. Emergency valving and venting can be added for carrying flammable liquids, under ICC steel tank specifications.



From its rugged, reinforced frame to its easyriding, contoured driver's seat—this *new* White Custom Cab is the finest money can buy!

Better visibility all around. More elbow and head room inside. Solid, welded construction throughout. Every quality feature of this cab is designed to give unexcelled operating safety and efficiency - and to reduce driver fatigue.

Available as an option on the famous powerpacked White 4400TD—it's another big White extra to give you a *competitive edge* in *your* business in the 1960 showdown.

THE WHITE MOTOR COMPANY, CLEVELAND 1, OHIO Branches, distributors, dealers in all principal cities

WORLD LEADER IN HEAVY DUTY TRUCKS



...60 YEARS OF LEADERSHIP

WHITE



3 HOISTS IN 1 IT'S A FRONT-END HOIST USING SADDLE POST ALONE FOR ECONOMICAL FLEET SERVICING FOR PROFITABLE TRUCK REPAIRING Fleet shops, dealer shops and repair garages find Globe "Universal" SLR Hoists meet almost every require-

Fleet shops, dealer shops and repair garages find Globe "Universal" SLR Hoists meet almost every requirement. Each post can be used independently . . . ample underbody working space allows more jobs to be done easier, better and faster.

Easy to install, economical, "Universal" SLR Hoists operate on compressed air or Globe Electric-oil unit. Lifting capacity is from 20,000 to 40,000 lbs. depending upon model.

To handle practically everything on four wheels, you can't beat Globe SLR Heavy-Duty Hoists!

Write today for complete information. Globe Hoist Company East Mermaid Lane at Queen Street, Philadelphia 18, Penna.

IT'S A TRUCK HOIST

USING BOTH POSTS



Light Low-Bed

An aluminum low-bed trailer is made by Vulcan Trailer Mfg. Co., Birmingham, Ala., with engineering aid of Kaiser Aluminum Corp., Oakland, Cal. The 7550-lb trailer will carry 20,000 lb. Several of the 37-ft trailers are used by Leonard Bros. Transfer Co., Miami, Fla., to haul aircraft engines.

New Products

Continued from Page 372

over the regular barrel. The crimped "skirt" of the sleeve grips the wire insulation, preventing creep. The Avikrimp style also features an attached nylon insulating sleeve. No extra insulation is needed. The sleeve is color-coded for wire range. All tongue types are available.

Contact Mr. Edward M. Muldoon, Pres., ETC, Inc., 990 E. 67th St., Cleveland 3, Ohio. Phone: EN 1-3144.

Streamlined Marker Lamp

is for trucks, tractors and semi-trailers. It's easy to install for use as a clearance, marker or identification



lamp. Made with red, amber, blue or clear lens.

Contact Mr. John W. Speaker, Pres., J. W. Speaker Corp., 3059 N. Weil St., Milwaukee 12, Wis. Phone: CO 4-0500.

Fast Starting Battery

supplies 12-volt starting power for 6-volt electrical systems. It supplies 12-volt power to the starting circuit then reverses to 6-volt power for operation.

Contact Mr. P. W. Strider, Automatic Battery Co. of America, P. O. Box 224, Goldsboro, N. C. Phone: REpublic 5-0617.

(TURN TO PAGE 376, PLEASE)

COMMERCIAL CAR JOURNAL, April, 1960

America's Most Experienced Builder
Of Compact Cars Presents The Answer
To Rising Car Fleet Costs . . .

RAMBLER FOR 1960!



RAMBLER FOR 1960

...The Car
That Remembers
The Fleet
Operator!

In 1960—more than ever before—it makes good sound sense to switch to Rambler for all your city government fleet requirements. For Rambler is the one car that offers the perfect balance fleet operators want:

- LOW FIRST COST—Compare Rambler's low initial cost with that of your present fleet units. You'll find you save when you buy Rambler.
- TOP ECONOMY—Rambler is America's recognized economy king. With more miles per gallon and low maintenance cost, you save every mile your Rambler fleet units operate.
- HIGHEST RESALE VALUE—You save again with Rambler when it comes time to trade or sell. Rambler has top resale value of all low-priced cars according to official used car guide books.
- STRONGER, SAFER SINGLE-UNIT CONSTRUCTION— Pioneered by American Motors, Single-Unit construction means lasting freedom from body-bolt squeaks and rattles... cuts maintenance costs to the bone. Deep-Dip* rustproofing means lasting protection against rust and corrosion.

For Complete Information
On How RAMBLER Can Cut
Your Fleet Costs . . .

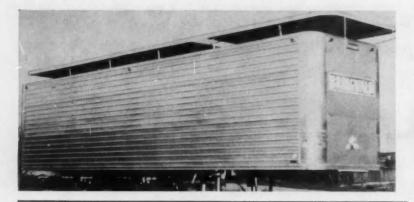
SEE YOUR RAMBLER DEALER

... or write or wire

FLEET SALES DEPARTMENT
DEPT. D-4

AMERICAN MOTORS CORP.

14250 Plymouth Road, Detroit 32, Michigan



The Roof is Off

A trailer with elevating roof was made for Bringwald Transfer, Inc., by Gramm Trailer Corp., Lima, Ohio. The roof is raised 10 in. by a crank on trailer side to give enough clearance to double-deck paper rolls with a lift truck. After loading, the roof is lowered and sealed. The unit also features Gramm Slideair suspension for independent axle movement.

AMALIE X-1.6

AMALIE Develops Special Diesel Engine Oil

ADE WITH PROTOL

If you've been having trouble with sludge, scored pistons, or frozen rings in your diesel engine—try the new Amalie XLO Diesel Engine Oil.

This new diesel lubricant has been designed and engineered for modern heavy-duty super-charged diesels. It is an exclusive Amalie product. There is no other diesel oil like it. Tests have shown it holds more sludge in suspension longer. A special combination of crude oils fight oxidation and acids better than ever before. And the high viscosity of this new oil lubricates the tight diesel tolerances more evenly than ever before.

Ask your Amalie Dealer for more information about this fabulous new diesel engine oil.



Member Pennsylvania Grade Crude Oil Assn. Permit No. 12

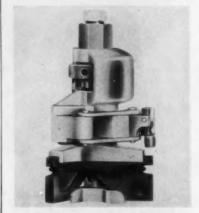
AMALIE DIVISION G-4 Sonneborn Chemical and Refining Corp., Franklin, Pa.

New Products

Continued from Page 374

Ridge Reamer

handles all modern engine blocks, including canted, short stroke and conventional, within a 3 to 5-in. range.



The Ammco Model No. 7100 features adjustable cutting tension for maximum smooth stock removal and a carbide cutter for accuracy.

Contact Mr. R. D. Stevenson, Adv. Mgr., Ammco Tools, Inc., 2100 Commonwealth Ave., N. Chicago, Ill. Phone: Rogers Park 4-6641.

Tire Recapping

is said to be faster with "Carbo-Kwik," a fast cure, cold rubber retreading stock.

Contact Mr. Ronald C. Mahnke, Public Relations Dept., Seiberling Rubber Co., Akron 9, Ohio. Phone: SHerwood 5-1111.

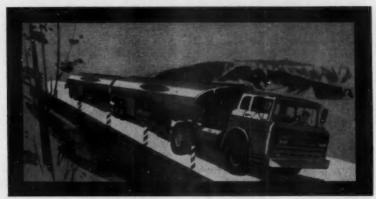
Gladhand Cover

gives positive closure, according to the (TURN TO PAGE 378, PLEASE)

COMMERCIAL CAR JOURNAL, April, 1960



ON the Highway



OFF the Highway



The Working Partner to Conventional Brakes Wherever there's a high hill and a heavy load, the Parkersburg Hydrotarder can turn the control of runaway energy into profits for you!

Equip your fleet with the world-famous Hydrotarder which has proved its worth for over two decades. It provides smooth control of your equipment through liquid absorption of driveshaft power. Hydrotarder-protected conventional brakes are always cool and ready for instant action on emergency slowdowns and stops.

See your Parkersburg dealer or write Gene Kaefer, P. O. Box 573B, Coffeyville, Kansas, for full information and custom-planned application data on the Hydrotarder.

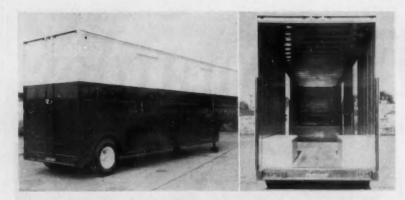
SEE YOUR PARKERSBURG MAN TODAY

Hetzel Bros., 1457 E. Washington Blvd., Los Angeles 21, Calif.

Page & Page, 3001 Walnut St., Denver 5, Colo.



PARKERSBURG . HOUSTON . COFFEYVILLE



Warehouseman Van

Fruehauf Trailer Co., Detroit, announces its new Warehouseman Van. Features include interchangeable steel and aluminum body parts, drop frame design and greater load capacity. Shown is the 35-ft model with 93-in. inside width, detachable wheelhousings, 27-in. drop, 2 single doors on curbside and standard extra-wide door on roadside. Special construction to keep cargo dry and dust-free includes a one-piece aluminum roof.

Rits full of D'Tool tricks!

NEW MASTER BRAKE TOOLS. An assortment of 10 tools in two plastic kits provides about every tool needed to service brakes: Bendix, Lockheed and total contact.

ndividual Kit \$7.90. tern Resale

higher West.

Very popular kit containing the fol-lowing tools: 270 Brake Shoe Spring Tool, 280 Brake Shoe Spring Tool, 285 Shoe Retaining Spring Tool, 286 High Offset Brake Wrench (%, %o"), 287 Brake Adjusting Tool.



New tools for late model brake systems. Supplements No. 288 Kit. Contains: 291 'k"-" Packard, Nash, Studebaker Wrench, 292 Hand Brake Adjusting Tool, 293 "C" Washer Pliers, 294 Brake Piston Puller, 295 Adjusting Tool for Corvair, Ford Line

WRITE FOR FREE CATALOG K-D MFG. CO. LANCASTER, PA.

290 Master Brake Tools Consists of Nos. 288, 289 Kits (see below).

> \$15.95 Eastern Resale, higher West.



. 285 moves, installs

Retaining Spring. 286 h" hex bleeds 7/16"-12 point adjusts.

No. 287 for all star wheel adjusting except Corvair.

No. 292 for Chrysler-built for Lockheed No. 294 brake piston puller, Lockheed

No. 295 adjusts on Corvain and Ford

New Products

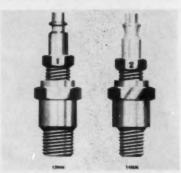
Continued from Page 376

manufacturer. It fits any make gladhand to keep dirt and moisture out of air lines when trailers are parked. Doesn't hinder coupling or uncoup-

Contact Mr. Arthur A. Berg, Berg Mfg. & Sales Co., 1712 S. Michigan, Chicago 16, Ill. Phone: WA 2-0294.

Air Plugs

let compressed air do the job of holding valves for you, according to the



maker. The constant air pressure in the cylinder holds the valve secure while you remove and install valve parts.

Centact Mr. E. L. (Spike) Havens, Silver Seal Products Co., 1732 Howard St., Lincoln Park, Mich. Phone: DUnkirk 6-0600.

Slip-On Tube Covering

called "Unarco Insutube" insulates bent piping or tubing, on which use of rigid material isn't practical. It consists of a braided asbestos inner tubing, light-weight fibrous-glass in-

(TURN TO PAGE 380, PLEASE)

They Load By Pushbutton

There's a
WATSON-DeWitt
MOTO-VATOR
to fit your needs, too



One of Consolidated Freightway's Moto-Vator equipped van trailers used for general cargo handling

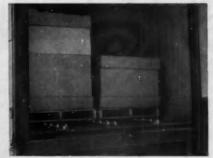
Performance-proved Moto-Vator models handle virtually all loading and unloading situations. With these powered floor conveyors in your truck, loads ride in and out at the touch of a button. No hand loading necessary, no need to run fork trucks in and out of van. You save time, trouble, and damage to cargo and equipment.

MOVABLE FLOOR Moto-Vator models use movable floor segments driven by a single drive chain. These handle cartons, drums, bales, containers, reels, sacks, bundles, carboys, unitized loads of all types. Consolidated Freightways uses this type.

PALLET SUPPORT Moto-Vator models use twin drive chains carrying aluminum pallet supports for specialized pallet operations. You can choose models for loading single wide pallets, or two pallets side by side.

Medel 2CP...
designed for handling wide pallets; dual chains are driven from common shaft.





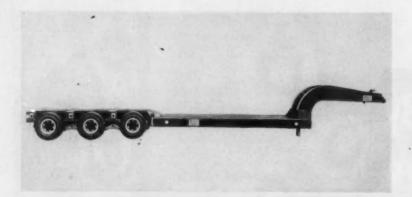
Twin pallet medels; available with synchronized or independentlypowered drive chains if desired.

Many Moto-Vator designs are readily available for special applications. For more details, write for free literature. Please address Dept. 18.



H. S. WATSON COMPANY

1316 67th STREET, EMERYVILLE 8, CALIFORNIA 1606 LASKEY ROAD, TOLEDO 12, OHIO



Three-Axle Trailer

Talbert Trailers, Inc., Lyons, Ill., designed this three-axle trailer for long, high, heavy-load hauling. The 15-in. tires give lower rear bridge height. Drop and level-deck models have spring suspension, cast spoke wheels, air vacuum brakes, lights, reflectors, directional signals, six last rings, four pipe pockets, longitudinal flooring, rear loading ledge and enamel finish. Load capacities are rated from 70,000-100,000 lb.

New Products

Continued from Page 378

sulation, and an outer covering jacket of braided asbestos tubing.

Contact Mr. E. Plummer, Sales Mgr., Fibrous Products Div., Union Asbestos & Rubber Co., 1111 Perry St., Bloomington, Ill. Phone: 3-8081.

License Plate Light

is for vehicles with stop and tail lights that don't illuminate the license plate. It features flush mounting design and two 2-cp bulbs for extra safety. If one goes out the other provides light.

Contact Mr. George Thomas, Sales Mgr., R. E. Dietz Co., 225 Wilkinson St., Syracuse, N. Y. Phone: 4-1071.

180 Amp Welder

is compact, lightweight and can be moved to the job for on-the-spot



welding. Dial type control is for setting output over a wide amperage range. It operates on 220-volt single (TURN TO PAGE 384, PLEASE)



DEPENDABLE

"Kings of the Highway"

DEPEND ON THE



E. P. MEAD President, Meads Frozen Foods Abilene, Tex.



L. M. VOSS President, Voss Truck Lines, Inc. Oklahoma City, Okla.



W. V. PRINGLE General Mgr. & Treasurer, Rockingham Poultry Mktg. Cooperative, Inc.



ANTHONY T. ROSSI Tropicana Products, Inc. Bradenton, Fia.



SIDNEY ALTERMAN President, Alterman Transport Lines, Inc. Miami, Florida



T. SCHLUDERBERG W. M. Schluderberg-T. J. Kurdle Co. Raitimore, Maryland



R. T. BREEDON, SR. President, Breedon Poultry Co. Morganton, N. C.



LESTER ERLEWINE Supt. of Maint., Watson Brothers Trans. Co. Omaha, Neb.



J. D. Jewell Inc. Gainesville, Ga.

King of Transport Refrigeration



No matter what your refrigeration problem, you, too, can

No matter what your refrigeration problem, you, too, can depend on Thermo King. Thermo King offers you fully automatic cooling and heating in the size unit and power plant you need. Self-contained units are powered by gasoline, diesel, propane, or electricity. 23 years of specialized experience guarantees you most capacity at least cost. Interested? Write us for more details.

World Leader in Transport Temperature Control

THERMO KING CORP.

314 West 90th Street • Minneapolis 20, Minnesota

8 ALL-NEW Brown Trailers give you . . .

biggest capacity per pound of



8 Basic models to choose from—three corrugated exterior skin models, three high-cube exterior post models and two extra-wide high-cube exterior post models, each with a choice of many options.

New LOW-BEAM king pins mean more inside height new, low-beam king pin construction in Series A Trailers gives more usable inside height. Redesigned rear frame increases height and width of rear door opening.

New OUTSIDE running gear mounting—outside mounting of running gear is standard on Series A Trailers... makes it possible to reposition running gear without altering trailer structure. You can choose Standard Tandem or Single Axle running gear or Brown's road-tested Cushionair Suspension. Conventional inside mounting of running gear is standard on step floor models, optional on others.

New ONE-PIECE roof for leakproof service—one-piece aluminum roof is riveted to upper longerons outside of cargo area only—protects cargo against water damage. Roof slightly crowned for fast water runoff—drain trough in top of rear frame keeps water from cascading over rear doors.

Parts and service available nationally—the Brown Trailer Branch and Dealer network serves all major markets from coast to coast. Prompt repair and parts service is available to national, as well as regional operators.

Low-cost financing new available—to conserve your capital, take advantage of Clark Equipment Company's convenient, low-cost financing plan. You can buy or lease any of the new Series A Trailers on terms which fit your needs.

trailer weight

What do you want in a trailer . . . high cube and light weight, light weight and low cost, low cost and high cube? There is a model in the new Brown Series A line of trailers to fit virtually every cube-weight-cost requirement.

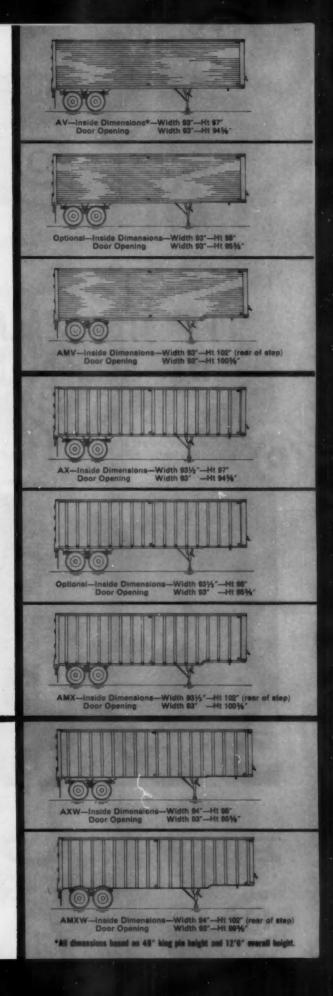
ALL-NEW from the ground up, the models shown here have been engineered to achieve maximum volume without weight penalty while retaining strength and structural rigidity. The new models represent a true balance between operator needs and structural, legal and weight limitations.

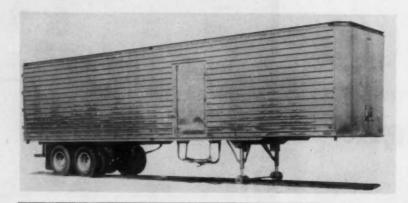
For more information about the new Brown Series A Trailers, contact the nearest Brown Trailer Branch or Dealer or write to Clark Equipment Company, Brown Trailer Division.



CLARK EQUIPMENT COMPANY BROWN TRAILER DIVISION Michigan City, Indiana

Be sure to get a quote from Brown





Protected Lighting

"Liteguard" is a new feature of trailers from Andrews Industries, St. Louis, Mo. Channeled rub and web rails carry a plastic covered wiring harness. Standard sections of harness can be connected to fit any size trailer, eliminate custom - wiring. Lights, mounted inside deep channels, retain full visibility. Lighting maintenance is made easy and fire hazards are almost eliminated. Andrews makes all types of trailers with Liteguard feature.

Superior sealants insure superior repairs

PERMATEX SEALANTS HELP KEEP FLEETS ON THE ROAD LONGER

Just as all repair jobs are not alike... all sealants are NOT alike. Permatex tailors them to the job... gives fast or slow... hard or soft setting... with special properties as needed. Stock them all for best results, and keep vehicles rolling.



COMPANY INCORPORATED
300 Broadway, Huntington Station, L. I., N. Y.
Factories: Brooklyn, N. Y. • Kansas City, Kan.

New Products

Continued from Page 380

phase power supply for welding materials from 20-gage to ½-in. (or thicker) plate. Voltage input adjustment permits full output performance under all power supply conditions.

Contact Mr. A. W. Sawyer, Adv. Dir., Lincoln Electric Co., 22801 St. Clair, Cleveland 17, Ohio. Phone: IV 1-8100.

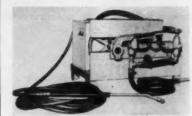
Spray Enamel

is fluorescent for safety, decoration or identification. It comes in 16-oz. spray cans in brilliant red or orange. It's for use indoors or out.

Contact Mr. T. S. Andrews, Dir. of Marketing, Martin-Senour Co., 2500 S. Senour Ave., Chicago 8, Ill. Phone: Victory 2-5000.

Multi-Job Washer

is a new cleaner for automotive bodies, parts, cooling systems, floors



and lifts. The all-electric unit isn't a steam cleaner. It combines heat, high pressure and a new detergent. The positive displacement pump draws electrically heated solution from a 55-gal drum. Pressure of the solution can be changed from 250 to 300

lb, depending on the job. It operates on 220-volt, 60-cycle, single phase, AC; is equipped with 40-ft hose, gun and two nozzles; weighs about 106 lb.

Contact Mr. Elliott Johnson, Adv. Mgr., Homestead Valve Mfg. Co., Coraopolis, Pa. Phone: AMherst 4-3240.

Portable Winch Hoist

weighs 7 lb and has 1000-lb capacity.



Inter-locking pawl system won't slip when oily. Slack cable has free release that works only when there's no load. The 15-ft cable stores on the drum. Can be rigged at any angle.

Contact Mr. G. Uhlig, Mgr., The Lug-All Co., 355 Lancaster Ave., Haverford, Pa.

Service Tools

are packed in kits by K-D. Included are Model Nos. 405 (Radiator Service), 290 (Master Brake), 288 and 289 (Brake). Model No. 296 Brake Piston Clamps hold brake piston under compression when shoes are removed.

Contact Jane Clark, K-D Mfg. Co., 526 N. Plum St., Lancaster, Pa. Phone: EX 2-4136.

4-Way Flasher Switches

flash for turns or as emergency signals. The Model No. 114 series have rotary knobs that turn to right or (TURN TO NEXT PAGE, PLEASE)

Kroger "paints better for less" thanks to DeVilbiss total service



DeVilbiss spray booth is 50-ft. long, 18-ft. wide. Painting schedule averages about one trailer a day.



KROGER - nation's 3rd largest food retailer-selected a DeVilbiss spray booth and paint heater for their new truck maintenance shop in Detroit. The shop services 76 tractors, 164 trailerspart of the important truck lifeline linking Kroger's chain of modern supermarkets. Kroger chose DeVilbiss hot spray for painting because they found it gives fast, uniform coverage with reduced overspray-and provides ideal spraying conditions regardless of weather. DeVilbiss offers total service that fits the proper method-hot spray, airless, or conventional spray-to your job. Contact our nearest representative. The DeVilbiss Company, Toledo 1, Ohio.





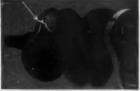
Aluminum Pneumatic Bulk Trailer

Handling sensitive chemicals is the purpose of this Fruehauf bulk trailer. Aluminum construction eliminates certain contamination problems. Granular or beaded material is discharged pneumatically by a greater pressure of volume air pressing the material downward. While this force is applied from above, a lower pressure is exerted in the discharge line to move the product through the hose. Discharge valves, located at base of compartment tanks, are easily removed for inspection and cleanout. Trailer lengths range from 34-40 ft.

Jim Didn't John Did!

It Pays to Be Sure! INSIST UPON Authorized MAGNAFLUX* INSPECTION WITH EVERY OVERHAUL!

◆ Authorized MAGNAFLUX inspection is your best safeguard against accidents and high-cost failures. It is the same inspection used by automotive companies to detect defects in parts and materials during their manufacture. It is the only completely reliable test during overhaul to make sure that steering spindles, crankshafts, connecting rods and differential gears are free from cracks—safe to go back into service in your equipment. For longer, safer, lower cost service between overhauls, insist upon genuine inspection with MAGNAFLUX; nationally available exclusively through Authorized MAGNAFLUX Overhaul Shops.



Fluorescent Magnaglo indication, as discovered on crank throw. Glowing line marks non-visible crack very near to final failure.



HALLMARK OF QUALITY IN TEST SYSTEMS

MAGNAFLUX CORPORATION 7308 West Lawrence Ave., Chicago 31, III.

New York 36 • Pittsburgh 36 • Cleveland 15 Detroit 11 • Dallas 35 • Los Angeles 22



Magnaglo inspection of this steering spindle gives clear indication of otherwise invisible serious cracks that could cause failure.

*T.M. Registered U.S. Patent Office

New Products

Continued from Page 385

left for signalling. Switch knob has four pilot lights: two green for turn signalling and two red for emergency warnings when all four turn signals flash simultaneously. Can be mounted on dash or steering column. Seven and four-wire models are available.

Contact Mr. George Thomas, Sales Mgr., R. E. Dietz Co., 225 Wilkinson St., Syracuse 1, N. Y. Phone: GR 4-1071.

Adjustable Mirror Head

is on a double-extending arm. The anodized aluminum head extends from 13% in. to 24% in. for greater rear-viewing and safety. The Model



No. 541-XX mirror head assembly has a double swivel ball-socket for easy adjustment.

Contact Mr. Walter Rodman, Sales Mgr., Supersite Corp., 330 Seymour Ave., Derby, Conn. Phone: RE 4-3374.

Rubber Gasket Material

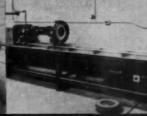
is "Hycar Nitrile Rubber," for manholes on tank trucks used for hauling fresh milk. The man-made rubber isn't affected by butterfat in milk and (TURN TO PAGE 390, PLEASE)



1 Lead Foreman, Lyle Clague installing crankshaft on Model 354B-RV Balancer







0



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BURLINGTON TRUCK

LINES REPORTS . . .

with crankshaft-flywheel-clutch balancing!







balancing program reduces engine down time-cuts driver complaints

Burlington's Central Repair Shop at Galesburg, Illinois, has been pulling gasoline engines after 100,000 miles for re-building. Since Bear-Balancing crankshafts-flywheel-clutch assemblies, they have been able to run engines 125,000 to 135,000 and in some cases up to 200,000 miles before re-building. This effected a savings of over \$6000 a year in replacement costs and greatly reduced engine down time.

Burlington, like many others, made some amazing discoveries on what benefits and savings can be effected with a Bear Balancing Program. Bear has prepared a complete, documented report on the Burlington experience. Your copy is available without cost or obligation. Fill in and mail the coupon TODAY!



highlights from the special report for fleet operators!

engine operational life INCREASED 25% AND MORE

dollar savings per year

SAVED OVER \$6000.00 IN PAST YEAR

total engine life

EXTENDED BY SOME 25,000 MILES

life of other parts

INCREASED APPROXIMATELY 30%

driver complaints

CUT FROM 3 OR 4 A DAY TO LESS THAN 1 A WEEK

the greatest name in automotive and industrial balancing

FREE-the complete report! BEAR MFG. CO., Dept. C-3, Rock Island, Illinois



I would like to have a free copy of the Special Burlington Program Report.

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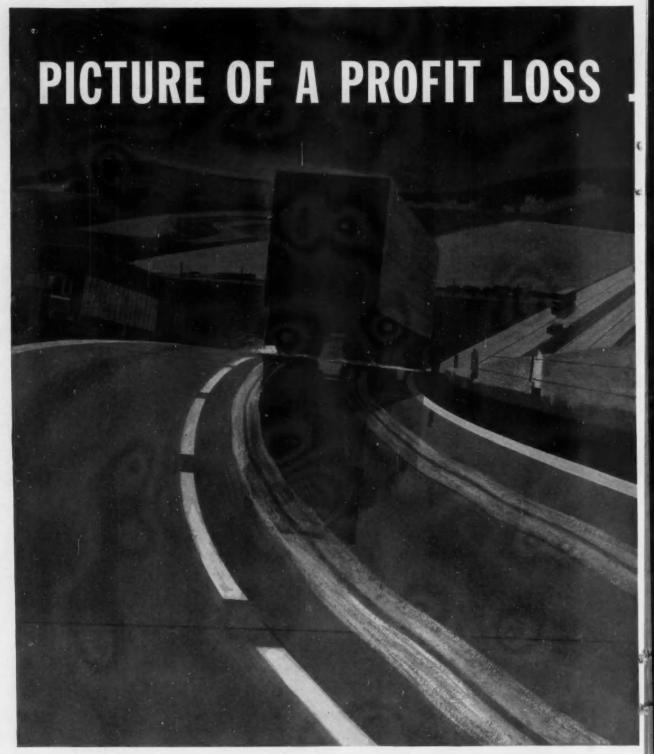
TITLE

COMPANY

ADDRESS

CITY

ZONE



NATIONWIDE SERVICE

AKRON-Motor Rim Manufacturers Co, ALBANY-Wheels, Incorporated ALBUQUERQUE-Wheels & Brakes, Inc. ALTOSNA-Wheel & Rim Sales Co. ATLANTA-John A. Harris & Son, Inc. BALTIMORE—Standard Wheel & Rim Co. BALTIMORE—Standard Wheel & Rim Co. BIRMINGHAM-Wheel, Rim & Parts Co. BOSTON—New England Wheel & Rim Co. BUFFALO—Frey, the Wheelman, Inc. CEDAR RAPIDS—Des Molaes Wheel & Rim Co.

CHARLOTTE—Carolina Rim & Wheel Co. CHICAGO—Stone Wheel, Inc.
CINCINNATI—Rim & Wheel Service, Inc.
CLEVELAND—Motor Rim Manufacturers Co.
COLUMBUS—Hayes Wheel & Spring Service
DALLAS—Southwest Wheel, Inc.
DAYENPORT—Stone Wheel & Rim Co.
DAYTON—Rim & Wheel Service, Inc.
DENVER—Quinn & McGill Motor Supply Co.
DES MOINES—Des Moines Wheel & Rim Co.
DETROIT—N. & H. Wheel Service, Inc.
EVANSVILLE—Auto Wheel & Rim Co., Inc.

FARGO— Wheel Service Company
FORT WAYNE— Wheel & Rim Sales Co.
GRAND RAPIDS—Rim & Wheel Service Co.
HAMMOND— Stone Wheel, Inc.
HARRISBURG— Standard Wheel & Rim Co.
HARRISBURG— Standard Wheel & Rim Co.
HOUSTON— Southwest Wheel, Inc.
INDIANAPOLIS— Indiana Wheel & Rim Co.
JACKSORVILLE—Southeast Wheel & Rim Co.
KANSAS CITY— Borbein, Young & Co.
KNOXVILLE—John A. Harris & Son, Inc.
LANCASTER— Standard Wheel & Rim Co.

LOS ANGELES—Wheel Industries, Inc.
LOUISVILLE—Auto Wheel & Rim Service
LUBBOCK—Southwest Wheel, Inc.
MEMPHIS—Beller Wheel, Brake & Supply Co.
MILWAUKEE—Wisconsin Wheel & Rim Co.
MOLINE—Mutual Wheel Co.
NASHVILLE—Beller Wheel, Brake &
Supply Co.
NEWARK—Automotive Safety Inc.
NEW HAVEN—Connecticut Wheel & Rim Co.
NEW ORLEANS—Southern Wheel & Rim Co.



Change the picture

wheels

"Wheel wobble" does more than just leave its mark on a wet pavement. It leaves its mark on tires, wheels, rig and driver-and writes in red ink across your profit and loss statement. With the positive, "built-in" alignment of Budd Wheel construction, you can change this picture -and eliminate wheel wobble.

- · Genuine Budd ball-face cap nuts, properly mounted, lock wheels in positive alignment . . . no wheel wobble can occur ... reducing uneven tire wear and costly cupping.
- Rims cannot slip and wheels stay tight, in correct alignment .: : eliminating costly time-consuming delays.
- You reduce excessive vibration, thus avoiding front-end steering assembly damage.

You profit through longer tire life, more recaps, longer recap life. Save money on downtime and maintenance costs, tooand help avoid accidents. Specify genuine Budd Disc Wheels and genuine Budd wheel parts-the perfect combination for greater economy in the long run. The Budd Company, Detroit 15.

"The best wheels are built by Budd"

FREE: Be sure to get a copy of our wheel manual, Maintenance is Not Magic. An easy-to-use guide that can save you real time and trouble.

AUTOMOTIVE

NEW YORK—Wheels, Incorporated OKLAHOMA CITY—Southwest Wheel, Inc. OMAHA—Morgan Wheel & Equipment Co., Inc. OMAHA—Omaha Rim & Wheel Co. PEORIA—Peoria Wheel & Rim Co. PHILADELPHIA—Kay Wheel Sales Co. PHILADELPHIA—Thomas Wheel & Barbara Barb

Rim Co., Inc.
PITTSBURGH—Wheel & Rim Service
PORTLAND—Six Robblees', Inc.
PROVIDENCE—New England Wheel & Rim Co.

RALEIGH—Carolina Rim & Wheel Co. RICHMOND—Dixie Wheel Co., Inc. ROCHESTER—Frey, the Wheelman, Inc. SALT LAKE CITY—Henderson Rim & Wheel

Service SAN ANTONIO-Southwest Wheel, Inc. SAN FRANCISCO—Wheel Industries, Inc.
SAVANNAM—Southwest Wheel & Rim Co., Inc.
SEATTLE—Six Robblees', Inc.
SOUTH BEND—Wheel & Rim Sales Co. SPOKANE - Bearing & Rim Supply Co.

SPRINGFIELD, ILL.—Illinois Wheel &

SPRINGFIELD, ILL.
Brake Ce
SPRINGFIELD, MO.—Borbein, Young & Co.
ST. LOUIS—Borbein, Young & Co.
ST. PAUL—Wheel Service Ce.
SYRACUSE— Wheels, Incorporated
TACOMA—SIx Robbles*, Inc.
TOLEDO—Wheel & Rim Sales Co.
WICHITA—Borbein, Young & Co.
WICHITA—Borbein, Young & Co. WICHITA- Borbein, Young & Co. WINSTON-SALEM- United-Autor

EXPORT
CLEVELAND, OHIO—C. O. Brandes, Inc.
4900 Euclid Avenue
CANADA

CALGARY—Mutual Supplies, Ltd.
EDMONTON—Alberta Wheel Distributors, Ltd.
EDMONTON—Alberta Wheels Supplies, Ltd.
REGIRA—Brakes & Wheels Ltd.
REGIRA—Brakes & Wheels Ltd.
TORONTO—Wheel & Rim Co. Canada, Ltd.
VANCOUVER—Wheels & Equipment, Ltd.
WINNIPEG—Ft. Garry Tire & Auto
Supplies, Ltd.

New Products

Continued from Page 386

it resists chemicals so that gaskets won't harden, chip or flake off to contaminate the milk.

Contact Mr. William A. Jarc, Adv. Dept., B. F. Goodrich Chemical Co., 3135 Euclid Ave., Cleveland 15, Ohio. Phone: UTah 1-8200.

Carbon-Arc Lead Burner

is for making emergency, on-the-job repairs to industrial storage batteries and for general heating jobs.



It's shown here repairing an industrial truck battery. Taking 6-volt

power from three cells of the battery (or more, depending on state of charge), flameless burner melts lead of intercell connector to terminal post. Lead antimony strip in worker's left hand fills eye of joint. Openings in vent plugs are covered with water-saturated cloths to prevent igniting gas in cells.

Contact Mr. Thomas R. Lane, Adv. Mgr., Exide Industrial Div., The Electrical Storage Battery Co., Rising Sun and Adams Aves., Philadelphia 20, Pa. Phone: FIdelity 2-8000.

Heavy Truck Tire

is the "Super Hi-Tred." In either nylon or rayon, it's for rugged use at higher speeds on longer runs. The manufacturer says it can be retreaded frequently. Special tread design is for good driving and sure stopping.

Contact Mr. L. J. Waldron, Sales Mgr., McCreary Tire & Rubber Co., Indiana, Pa.

Aluminum Alloy Bearings

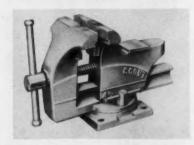
are offered for the automotive industry. Some advantages are said to be

corrosion resistance, high thermal conductivity, conformity to misalignments, adaptability to varied applications and ability to resist fatigue. Permite Preferred aluminum alloy bearings are said to take loads up to 10.000 psi.

Contact Mr. S. M. Kennedy, Vice Pres., Aluminum Industries, Inc., 3670 Werk Rd., Cincinnati 11, Ohio. Phone: MOntana 1-5700.

Shop Vise

features a unique slide bar design that combines front jaw and slide bar in a single casting. Also featured are removable steel insert jaws, precision-machined screw, large anvil with forming horn and positive



locking swivel base. The Scout comes in widths of 3½, 4 and 4½ in.

Contact Mr. John Tuohy, Asst. Sales Mgr., Wilton Tool Mfg. Co., Inc., 9525 W. Irving Park Rd., Schiller Park, Ill. Phone: NA 5-7770.

Engine Thermostat

controls engine temperature with a positive acting thermal element. An automotive thermostat tester is also available from Eaton to determine whether thermostat is operating accurately.

Contact Mr. George Schneider, Mgr., Replacement Sales Stamping



INFORMATIVE





Div., Eaton Mfg. Co., 789 E. 140th St., Cleveland 10, Ohio. Phone: GL 1-5600.

Truck Mufflers

are for all major makes and models. Walker's new line of heavy-duty truck silencers provide maximum sound control without power loss. Accessories include hangers, pipe connectors, flexible couplers, 90-deg elbows, tail spouts, curved pipe stacks, silencer and pipe guards and flexible tail pipe.

Contact Mr. William F. Smithana, Dir., Sales Promotion Services, Walker Mfg. Co., 1201 Michigan Blvd., Racine, Wis. Phone: ME 2-8871.

Oil Filter and Refiner

features electric automatic heat control. It heats the oil in winter and cools it in summer. It's installed anywhere under the hood without need of removing present filter. For 6, 12, 24 and 32-volt systems.

Contact Mr. Howard Diercks, Sales Dir., Electro-Refiner Corp., 6251 W. Touhy Ave., Chicago 46, Ill. Phone: RO 3-8447.

Load Binders

are made of drop forged metal parts. safety of drop forged metal parts. The six "Supreme" models feature

Mighty Tow-Mite



Moving of materials in close quarters where power, compactness and agility are needed is said to be easy with this little hauler. The "Tow-Mite" from Northwestern Motor Co., Eau Claire, Wis., weighs only 750 lb, Its 4-hp gasoline engine powers it to pull 630 lb. Features include footpedal operated speed control and brake and heavy-duty Borg-Warner automatic transmission.

"beefed up" design and construction. Parts are hot drop forged and heat treated before assembling.

Contact Mr. Randall K. Ream, Sales Mgr., Canton Mfg. Co., 2408-13th St., N. E., Canton 5, Ohio. Phone: GL 3-

Record Holders

are for storage of truck documents carried in transit. Easily opened and closed, they're transparent, airtight and weatherproof. The 5 x 7-in. plastic holders won't harden, crack or vellow in use.

Contact Mr. Robert Krumwiede, Sales Mgr., Chicago Desk Pad Co., 4640 N. Oketo, Chicago 31, Ill. Phone: UN 7-7440.

Oil Test Kit

is for testing detergent oils. Gerin's Model No. PK4 crankcase oil test (TURN TO PAGE 394, PLEASE)

what other pump can give such performance?



Tokheim submerged-type pumps are already standard on the heavy-duty trucks of two leading makers. Next time your fuel pumps need replacing, better replace with Tokheims.

TOKHEIM IN-TANK

electric

FUEL PUMP

- SOLVES FUELING PROBLEMS prevents flooding, starving, surging.
- IMPROVES ENGINE OPERA-TION at temperature extremes. Assures fast starting in cold weather.
- 3 TIMES THE LIFE of conventional pumps—less down time.
- STOPS VAPOR-LOCK. Prevents valve burn-out. Permits continuous open-throttle driving.
- OPERATES INDEPENDENTLY OF ENGINE. Fuel supply at carburetor is always ample.
- MOUNTS IN FLANGE-EQUIPPED TANKS. Readily available from truck equipment distributors.

Send coupon for complete information. Attach to letterhead.



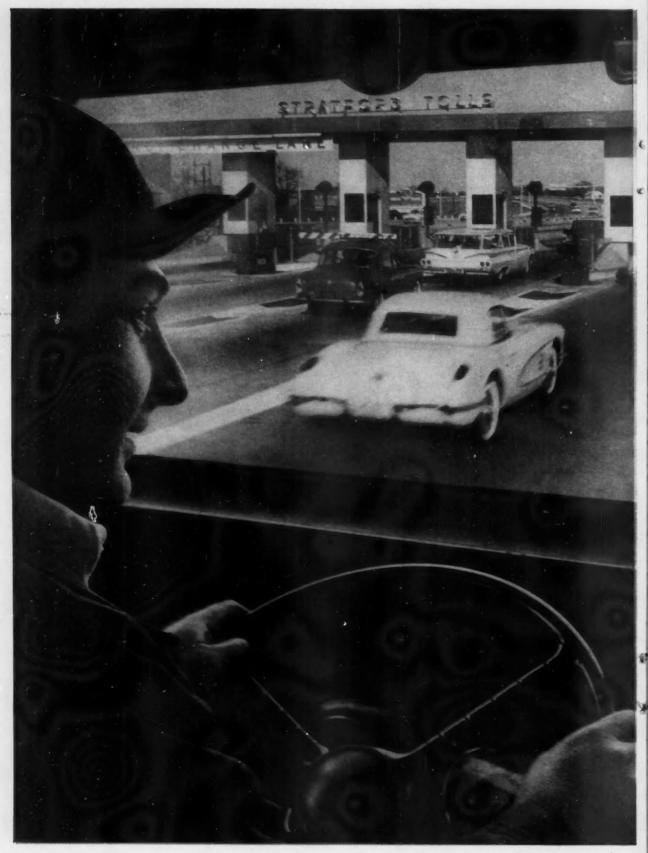
General Products Division

☐ Please send bulletin and prices of your IN-TANK ELECTRIC FUEL PUMP. ☐ Have your Representative call.

Name_____ Company_

Address
(Clip and mail with your letterhead)

TOKHEIM CORPORATION, Fort Wayne 1, Indiana



392

COMMERCIAL CAR JOURNAL, April, 1960



Gain more miles per mill with J-M Brake Blocks!

...Longer Service Life Results from J-M's Skillful Compounding, Molding and Press-Curing Techniques

If you can drop just a *fraction of a penny* from your cost-per-mile ratio, your payload profits will take a healthy jump. Here's one sure way to achieve this cost improvement: Johns-Manville Brake Blocks.

J-M Brake Blocks will give you the optimum performance that delivers thousands of added miles of safe...sure...low-cost stops. Their long, dependable service life results from more than 50 years of J-M experience in compounding, molding and press-curing friction materials.

Many fleet operators have already discovered the valuable dividends gained by using Johns-Manville Brake Blocks. How about you?

J-M BRAKE BLOCKS OFFER THESE IMPORTANT ADVANTAGES:

FIELD SERVICE. To guarantee you the most for your trucks, J-M has a free Brake Advisory Service. A J-M friction expert will study every vehicle in your fleet... then recommend the block, or combination of blocks, with the precise friction level you need for maximum mileage at minimum cost-per-mile.

RED FOR TRUCKS. J-M Brake Blocks are color-coded for quick identification. This coding eliminates installation mistakes. Every time, simply by following the color-coding, the right blocks get to the right spot.

performance. These dependable asbestos blocks deliver uniform friction balance on all four wheels, under all weather and temperature conditions. There's no fading; recovery is fast. No glazing, scoring or heat checking of brake drums.

AVAILABILITY. Fast service and immediate availability in any quantity from your J-M Distributor.

For full information, write to Johns-Manville Brake Advisory Service, Box 14, New York 16, N. Y. In Canada: Port Credit, Ontario.





COLOR-CODED FOR EASY IDENTIFICATION!

Style No. 2500 RED

-high friction range for Trucks

Style No. 2300 YELLOW

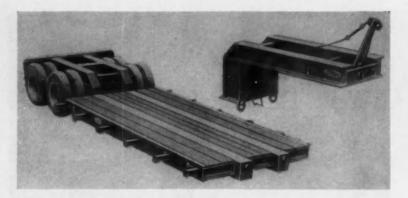
-medium friction range for Buses

Style No. 2100 GREEN

—low friction range for longest life

JOHNS-MANVILLE BRAKE BLOCKS





AGVAJO Freight Lines agree ... Sprague Air-Push Windshield Wipers match the overall, gratifying, dependable performance Freightliner and Navajo have established.

Navajo Freight Lines, Inc., of Denver, operate over 10,000 route miles in Arizona, California, Colorado, Illinois, Indiana, Kansas, Missouri, Nebraska, Nevada, New Mexico, Oklahoma and Texas. An ever increasing number of White-Freightliner Tractors help Navajo's "Blue-Eyed Indian" ride with bigger payloads at lower cost. Sprague Air-Push

Windshield Wiping equipment is standard on all new Freight-liners. Good visibility in bad weather, with maximum service—minimum maintenance is assured. Leading Bus/Truck Operators specify Sprague when acquiring new equipment. Service/Information from your nearby Sprague Distributor; or direct from factory.



Talbert's "Challenger"

This is one of Talbert Trailer's new "Challenger" series offered in both drop and level-deck models. The new series is offered with 18, 27 and 36 ton load capacities. Standard equipment includes high tensile steel construction, Hendrickson tandems, oak flooring, lashing rings, clearance and directional lights.

New Products

Continued from Page 391

kit, which doesn't use blotters, shows whether or not to change oil or filter and whether 'engine needs attention because of fuel, water or metal particles found in the oil.

Contact Mr. H. Van Dorn, The Gerin Corp., Avon, N. J. Phone: PRospect 4-3256.

Clearance-Marker Lamp

features a non-rolling neoprene retaining ring that keeps lens from popping off. The Model No. 79 clearance-marker lamp has two independently operating bulbs and lens that is pried off for bulb replacement.



There are no screws to remove. It's available with red or amber lens for 6 or 12-volt systems.

Contact Mr. Milton Putterman, Exec. V. Pres. Yankee Metal Products Corp., Norwalk, Conn. Phone: TEmple 8-5541.

Ignition Advance Tester

is Allen's Model No. 27-27. A precision distributor advance tester and timing light are combined in one compact, portable unit. Single scale meter ranges from 0-60 deg in 1-deg

It's a Sleeper!

First sleeper cab offered by Dodge on its new cab-forward trucks, this unit provides truck operators with maximum comfort and style in a minimum of space. The 75 in. wide sleeper adds only 22 in. to Dodge's 89\cup4-in. BBC dimension on cab-forward models. There's also 18 cu ft of storage space under the berth for tools, luggage and packages.

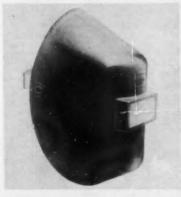
divisions. All testing is done on vehicle.



Contact Mr. Gerald L. Harmanson, Adv. Mgr., Allen Electric and Equipment Co., 2101 N. Pitcher St., Kalamazoo, Mich. Phone: FIreside 5-8531.

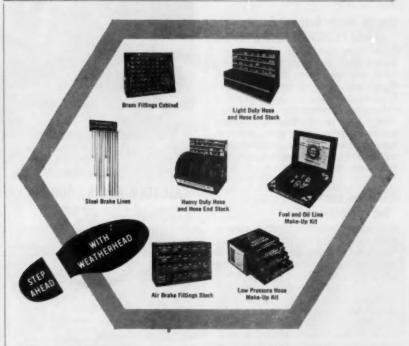
"Narrow-Front" Helmet

is for welding protection against infra-red and ultra-violet rays, sparks, molten metal and flying particles.



The Willson Model No. 34 is compression-molded of polyester resin, reinforced with glass fiber. The one piece, seamless shell is lightweight and form-fitting. Goggles and some types of respirators can be worn under the helmet.

Contact Mr. A. Karstaedt, Willson Products Div., Ray-O-Vac Co., 212 E. Washington Ave. Madison 10, Wis. Phone: ALpine 5-7201.



Stop Sending Out for "Short" Parts

Weatherhead's FULL LINE Stock System can save you man-hours and money. Instead of stalling a job while top-pay men hunt and pick in the parts crib—only to send out to the jobber for "shorts"—Weatherhead has developed a system that lets you stock the parts they need where they need 'em (and can see 'em).

Weatherhead makes more original equipment brass fittings, fuel lines, brake lines, oil lines and related hydraulic parts than any other manufacturer. And each family of parts is available for replacements, too—in a handy stocking cabinet, designed for on-the-job use. A few of these are shown above. Notice that each is flexible as to contents; you stock it with the assortment you need. And each gives you at-a-glance stock-checking, so you can reorder in plenty of time.

Best of all, in most cases you get these cabinets *free*, when you order them stocked with the assortment *you* need, from your Weatherhead Jobber. Every day you delay calling him you're losing man-hours and money.



April News Roundup

Ringsby Boosts Overseas Service

DENVER, COLO. - Ringsby Truck Lines President J. W. Ringsby returned early last month from a twoweek trip to Japan, Singapore and Hongkong. His purpose was to boost Ringsby's special ship-trailer "Vanex" import-export freight service. Aim is to provide through trailer service to these far-east areas. Fleet now has export-import offices in both Los Angeles and San Francisco, Cal.

ICC Warns Employees, "Don't Be Influenced"

WASHINGTON, D. C .- Interstate Commerce Commission Chairman John H. Winchell put in writing a warning to the Commission's some 200 hearing examiners and attorneys that they face possible dismissal for improper associations with persons doing business before the Commission. Citing established standards of conduct for the staff, Winchell's memo read, "recent occurrences indicate either a deliberate disregard of these requirements or at the least a distinct lack of awareness on the part of certain examiners of their true import."

Douglas Love Joins SAE Staff

NEW YORK CITY-Douglas A. Love has been assigned to handle staff work for Society of Automotive Engineers Truck & Bus Technical Committee. He came to SAE from work as a Develoment Engineer for AiResearch Mfg. Co., holds a BME degree from Cornell University.

Don't Let Railroads Buy Barge Line, Says ATA

WASHINGTON, D. C .- Illinois Central Railroad and Southern Pacific Co. have asked ICC to OK their purchase of the John I. Hay Co., a barge line. (TURN TO PAGE 398, PLEASE)

FLEET OPERATORS!

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GUARANTEE]]

PROCEDURE for ending COSTLY DISASSEMBLIES!

The new model 510 Sun Scope Motor Tester (left) quickly tells you whether or not an engine should be "opened up."

Too often, standard Preventive Maintenance procedures result in costly disassemblies... which many times are unnecessary. But a simple Cylinder Leak Test for instance, an exclusive Sun Model 510 feature, will tell you the "inside story" without disassembly work.

This way you know the specific reason

for any trouble, instead of guessing. And it will end unnecessary replacement of items that "might be trouble"...now you'll know for sure.

The new Sun procedure will save hundreds of hours of service time... and will cut labor and replacement costs. Why not investigate your nearby Sun representative's program... that assures you "Satisfaction Guaranteed" with your equipment purchase as well as with new service procedures.



EQUIPMENT SELECTION NELP—Your Sun representative will analyze your business and your present equipment to help you determine which models best suit your needs.



EASY PAYMENT PLAN—Your Sun man has a tailor-made purchase plan for you. He'll be able to set you up in profitable business that will actually pay for your equipment as you use it.



DELIVERY and INSTALLATION—The same Sun man from whom you buy the equipment will expedite the delivery...then organize the installation in your shop so it's right!



EQUIPMENT TRAINING — He'll train you and your men so that you can IMMEDIATELY get the full value from your equipment. He'll provide you with all the 'know-how' and technical information that will make you a real expert.



SERVICING — He'il see to it that your service needs are taken care of should minor or major repairs become necessary. There are over 30 Sun service branches



NEW EQUIPMENT CAT to toff the press ... tells you what you at you to the job right. A real treasure chest of shop leas ... takes the guesswork out of equipment ection.



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Get the details now on why you're way ahead . . . with Sun!

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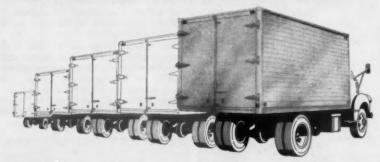
Yes sir, I'd like to learn more about Sun's new "Satisfaction Guaranteed" program, and how it can benefit me. Send me the details, include new, free equipment catalog, too. (please write name and address in margin below)



It's a Pickup Truck!

Ford Motor Co.'s new Falcon Ranchero features a 6-ft box, 800-lb payload capacity, up to 50 per cent greater fuel economy and the style and comfort of a passenger car. The low priced pickup truck has turn signals and oil filter as standard equipment. Overall length is 189 in., width is 70.6 in. and height is 55 in. It has a 90-hp, 6-cyl engine and three-speed manual synchromesh transmission.

OUTSTANDING!



LYN ALUMINUM TRUCK BODIES!

Outstanding performance – LYN bodies carry bigger payloads because LYN superior design provides greater cargo space; what's more, LYN lightweight aluminum reduces deadload up to 40%!

Outstanding durability—LYN superior construction insures a 100% leakproof body with greater strength designed into every point of stress to completely eliminate racking, drumming or ballooning! LYN bodies last longer!

Outstanding beauty-LYN aluminum bodies are rustproof, easy to keep clean and bright...never need painting.

Outstanding economy...LYN bodies cost less to buy, less to assemble, less to maintain!

See your LYN dealer. Compare LYN bodies. Find out how LYN aluminum truck bodies give your fleet outstanding performance... outstanding beauty... with real economy of first cost and operation!

Call your nearest LYN dealer, or write Charles MacLean, Sales Manager.



LYNCOACH & TRUCK CO., INC.

Oneonta, N.Y.

April News Roundup

Continued from Page 396

American Trucking Assns. says the move poses the threat of "destructive competitive practices" and has asked the Commission to say, "No."

Mayflower Says Most '59 Moves Went to Arizona

INDIANAPOLIS, IND. — Year-end figures on household moves reported by Aero Mayflower Transit show Arizona closed out 1959 with 71.6 per cent more incoming than outgoing moves. Close second was Florida with 69.03 per cent more in than out with California running third with 63.2 per cent. As compared to 1958, Arizona showed 25.6 per cent more families moving into the state in 1959. California's increase in 1959 over 1958 was 18.7 per cent with Florida third at 17.7 per cent.

Terminal Financing Conference Scheduled

EVANSTON, ILL.—May 19-20 are the dates of a proposed conference at Northwestern University on questions of financing truck terminals. Such subjects as "should you own, or rent under long-term lease" will be under discussion. If you are interested, drop a line to Robert S. Nelson, Northwestern University 1804 Hinman Ave., Evanston, Ill.

Stanford Offers Executive Training

STANFORD, CAL. — Stanford University's Graduate School of Business is offering a month-long training program for "middle-management" transportation and traffic executives. Dates are June 19 to July 16. All forms of transportation will be considered on a management-decision, (TURN TO PAGE 404, PLEASE)



Lightweight PPG Superfine Fiber Glass Insulation is very easy to work with, is quickly cut to exact sizes, it's available in a variety of densities, thicknesses, widths and facings to meet your specific requirements.

Keep them cool with PPG Fiber Glass Insulation! Costs less in the long run, too. Here's why—

For Trailer Manufacturers

PPG Superfine Fiber Glass Insulation is easy to work with. It's lightweight . . . compresses in storage to take up less room, yet bounces back to its original shape when you're ready to use it . . . cuts readily to correct size with a knife . . . is flexible, yet has sufficient rigidity to stay in place while you install it . . . saves you installation time over other types of insulation . . . cuts costs for you . . . gives your customers a top notch insulation job that will provide years of more-than-satisfactory thermal and acoustical service in their fleet equipment.

For Fleet Operators

PPG Superfine Fiber Glass Insulation in your trailer provides the finest insulation you can get, especially for refrigerated trucks. It's permanent . . . once installed, it stays in place . . . road vibration will not shake it loose . . . is waterproof, flameproof, verminproof, mildewproof, odorless . . . is 50% lighter than comparable insulating agents, giving you a greater payload capacity . . . enables you to maintain temperatures you want in your equipment . . . excellent, too, for cab and motor-housing fire wall insulation to control both noise and excessive temperatures.

For more information . . . about PPG Superfine Fiber Glass Insulation, contact your nearest PPG Fiber Glass Sales Office, or write Pittsburgh Plate Glass Company, Fiber Glass Division, One Gateway Center, Pittsburgh 22, Penna.

Sales Offices: Attleboro, Atlanta, Buffalo, Charlotte, Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, Fort Wayne, Houston, Kansas City, Los Angeles, Louisville, Milwaukee, Minneapolis, New Orleans, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco and Washington.



GET REAL PRODUCTIVITY-



"8V-71" FEATURES YOU GET WITH NO OTHER TRUCK DIESEL

- Gives you 270 to 290 h.p. and weighs practically the same as most 220-h.p. engines.
- High horsepower and high torque without turbocharging.
- Saves fuel and extends engine life by cruising at an easy-stroking 1700 r.p.m.
- This same engine, with a dual-speed governor, also operates at 2100 r.p.m. for faster hill-climbing.
- Cuts trip-time on any run as opposed to an ordinary 220-h.p. engine.
- More power in less space.

ALL-PURPOSE POWER



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Makes It Easy To Figure the Savings you'll make by switching to GM Diesels in trucks.

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> 97 H.P. 130 H.P. 195 H.P

GET"8V-7" DIESELS



Makes <u>Two</u> Round Trips Daily Instead of <u>One</u>—because it climbs grades faster in higher gear

You don't have to sell E. W. Sandygren, President of Seattle's Inland Petroleum Transportation Company, on his trucks with "8V-71" Diesel engines—one of the big brothers in the "71" Series family.

"Our truck No. 33 makes two 416-mile round trips daily between Pasco, Washington, and Grangeville, Idaho," he reports. "Our other trucks with 6-cylinder engines take 13½ to 14 hours to do it once. And since both of them keep to the 45 m.p.h. speed limit, No. 33 has to be making up the time on the grades."

Actually, this is a pretty typical report for trucks powered with "8V-71's." Truckers the country over are discovering that here, at last, is a real truck engine that can give them 270 to 290 hill-climbing horsepower—with practically the same weight as most 220-h.p. Diesels. "8V-71's" develop their high power and torque without turbochargers of any type.

Even when equipped with smaller fuel injectors for increased economy, they still develop more power at lower r.p.m. than the usual 220-h.p. engine. This means less maintenance, longer engine life!

Or you can have an "8V-71" with a dual-speed governor and team it with a fast-ratio axle. That *really* lets you have your cake and eat it—with enginesaving, fuel-saving r.p.m. for normal going AND plenty of reserve power at 2100 r.p.m. to make better time on every hill.

Here, then, is a Diesel engine that's bound to save you time and money in the toughest operations. Proof? See your GM Diesel Distributor—he's in the Yellow Pages under "Engines, Diesel." And for a comparison of Diesel vs. gasoline costs, write for the GM Diesel Operating Savings Computer. Get one—free—by mailing the postcard today!

DETROIT DIESEL ENGINE DIVISION

GENERAL MOTORS, DETROIT 28, MICHIGAN

In Canada: GENERAL MOTORS DIESEL LIMITED, LONDON, ONTARIO

Parts and Service Worldwide

LINE SETS THE STANDARD OF DIESEL PRODUCTIVITY

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Continued from Page 398

problem solving basis - highlighted by the use of a computer to project "several years" of operation. For details, write Karl M. Ruppenthal. Stanford University, 621 South Hope St., Los Angeles 17, Cal. Phone number is MAdison 7-0653.

Truck Man Switches to Railroading

NEW HAVEN, CONN .- Frank W. Alger, Jr., has switched jobs. He was operations manager of the Alger Bros. Division of Adley Express. In his new job, he'll be applying his truck experience to the piggy-back operations of the Maine Central Rail-

Rail Man Switches to Trucking

MENLO PARK, CAL .- Moving in the other direction, William G. White becomes a senior vice president of

Consolidated Freightways. He has been vice president-operations for the Delaware, Lackawanna and Western Railroad. For Consolidated, he'll be in charge of coordination of CF's truck operations with other means of transportation. Responsibility includes CF's Coordinated Transportation Services Division, Trans-Ocean Van Service, Transcontinental Transport, Inc., and Warehouse and Cartage Division.

GSA Is Big Vehicle Lessor

WASHINGTON, D. C .- Federal government's General Services Administration is a vehicle lessor. It "rents" vehicles to other branches of the government. Rates include maintenance, depreciation, overhead, etc., at cost. For example, minimum charge for a sedan is \$33 a month plus 5¢ a mile for all mileage over 300. It also is set up for daily or trip-leasing. GSA has 46 rental "pools" with about 14,000 vehicles.

Booklet Tells Alabama Truck Story

MONTGOMERY, ALA.-Alabama Trucking Assn. can be justifiably proud of its new 16-page, 2-color booklet "Alabama's Rollin' Lifeline." It tells how truck use in Alabama has grown, how in many places in the state trucks are the only transportation, what products move by (TURN TO PAGE 406, PLEASE)



CURTIS HIGH-PRESSURE

Keeps trucks, trailers and buses shining with half the ef-

fort. 300 lbs. of pressure. A real power wash! Pistol grip

nozzle throws fine spray or

sharp jet. Knocks off dirt, grit,

WASHER

salt deposits.

AMERICA'S FLEET OWNERS

KEEP THEM ROLLING WITH

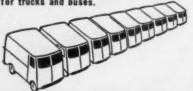


EQUIPMENT

All the pressure your men can usefor labor-saving tools.

The Curtis CV Compressor is built for fleet maintenance. Power for painting, lifts, grease-guns, impact wrenches, tire inflation! All the compressed air a shop can use all the time-The right Curtis compressor on the job assures an adequate and dependable supply of air at the proper pressure. Positive self-starting. And self**lubricating Curtis compressors (with Timken** main bearings) provide trouble-free service year after year. Sizes 1/4 to 50 H.P.

Curtis also manufactures TWO POST LIFT for trucks and buses.



CURTIS "CV" AIR COMPRESSOR



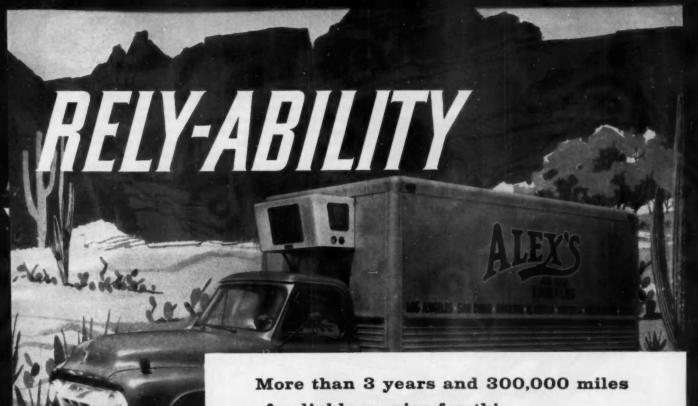
Gurtia MANUFACTURING COMPANY

WRITE DEPARTMENT 56

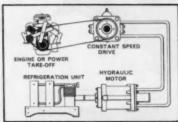




The first National Automobile Show to be held in Detroit will be from Oct. 15-23, 1960. Shown is the 17-acre exhibition center now being built. It will be dedicated at the auto show opening. The circular convention arena in the foreground has a great exhibits section beyond. Rooftop, indoor, underground and surface areas will hold 6350 parked cars. One of Detroit's expressways runs under the building and emerges near the main entrance.



of reliable service for this Sundstrand refrigeration drivewith no time out for repairs



In the more than three years since its first Sundstrand constant speed refrigeration drive was installed, Alex Foods, Inc., of Anaheim, California, reports the unit has never been out of service for repairs.

The refrigerated truck is used for deliveries on a 465-mile route from Anaheim south to San Diego, then across the mountains to the 120° heat of El Centro, California. During the trip, the Sundstrand drive often is used continuously to maintain the required 34° in the truck's refrigerated compartment. To date the tachometer installed on the unit shows it has turned 975 million revolutions with no maintenance, and one oil change.

Records such as this are not limited to a few installations. On refrigerated trucks, trailers, and tankers transporting perishables locally and cross country, Sundstrand constant speed refrigeration drives are paying off in reliable, maintenance-free service, lower operating costs, and greater onthe-road time. Our Bulletin No. 5002-4 gives complete details about constant speed refrigeration drives. Write for a copy today.

SUNDSTRAND HYDRAULICS

2210 Harrison Ave., Rockford, III.—Eastern Sales Office: 89 Summit Ave., Summit, N. J.

AIRCRAFT AND INDUSTRIAL HYDRAULIC TRANSMISSIONS AND VALVES . OIL BURNER PUMPS MACHINE TOOLS AND ACCESSORIES . PACKAGING MACHINERY

SMALL TOOLS AND INDUSTRIAL SPECIALTIES





Traveling Showcase

Chevrolet's mobile truck display has been completely rebuilt and fitted with new exhibits. It starts a new tour, following its premier at the Chicago Auto Show. Before being rebuilt, the original exhibit completed a two-year, 40-state tour of auto shows, fairs, expositions and dealerships. The showcase is housed in an open-side van body on a Chevrolet heavy-duty, tandem axle truck. Displayed are two full-size truck chassis with important parts visible. Electric motors operate moving parts. Featured are the new suspensions used on 1960 Chevrolet trucks.



LIFTS EVERYTHING . . . from Sports Cars to Heavy Vehicles

only lift of its kind in the world today ——!!

The WATCO Liftmaster solves practically all conceivable lifting problems in today's modern repair shop. This versatile, air-powered hoist is completely portable and raises most vehicles with ease.

The new LIFTMASTER can easily be handled by one man . . . so mobile it can even be positioned by a child. Made of the finest steel, it has the durability and capacity to handle all but the heaviest trucks.

100% SAFE . . . the LIFTMASTER automatically locks in raised position giving 100% safety even with complete air power failure. 100% VERSATILE . . can be used inside or outside, anywhere an air hose will reach.



Special Adapter for Liftmaster (\$30 additional) enables you to lift vehicles with extra long overhang or where obstructions prohibit normal lifting. This amazing Adapter lifts on the frame providing you with more flexibility. Another reason why the Liftmaster 700 is today's best buy.

SPECIFICATIONS

Rated Lifting		Space Betw	reen
Capacity 7.00	O lbs.	Claws	243/4"
Length	73"	Wheels, Fro	ont:
Width	41"	Dia.	622
Height.	36"	Wheels, Re	ar:
Reach	55"	Dia.	811
Lifting Height	52"	Weight	700 lbs.
Claw Height	10"		

"Write for free WATCO catalog or name of your nearest WATCO Jobber."

WATERVLIET TOOL CO., INC. P.O. Box 350, Albany, New York



April News Roundup

Continued from Page 404

truck in the state, the investment and employment of the industry, how it helps employment and industry, how much in taxes trucks pay the state, the different types of trucks serving the state and how safe they are.

Pony Express to Ride Again

ST. JOSEPH, Mo.—July 19 is the date for a major event in this year's 100th anniversary celebration of the Pony Express service. Riders will start from here and from the western terminus, Sacramento, Cal., to re-enact a typical run. They'll be raising dust through the states of Missouri, Kansas Nebraska, Colorado, Wyoming, Utah, Nevada and California.

The original Pony Express service, in operation a little over a year between April 3, 1860, and October, 1961, took an average of 10 days for the 1966-mile gallop. The re-enactments are expected to require about nine days each for both the eastward and westward runs. However, the original Pony Express runs often took less time. Lincoln's inaugural address in 1861, for example, was carried by the Pony Express in less than eight days.

This year's centennial celebrations of the Pony Express will be largely a tribute to American youth. Most of the daring riders of the famous mail-carrying service were very young men—many of them in their teens. An advertisement seeking Pony Express riders, stated: "Wanted—young, skinny, wiry fellows not over 18. Must be expert riders willing to risk death daily. Orphans preferred. Wages \$25 a week. . . ."

Riders were required to take this oath upon entering service: "I hereby

swear, before the Great and Living God, that, during my engagement, and while I am an employee of Russell, Majors & Waddell, I will, under no circumstances, use profane language; that I will drink no intoxicating liquors; that I will not quarrel or fight with any other employee of the firm, and that in every respect I will conduct myself honestly, be faithful to my duties, and so direct all my acts as to win the confidence of my employers. So help me God."

The youthful Pony Express riders consistently outran Indian pursuers while carrying the mails through the wilderness, often through blinding snows and howling storms, and in extremes of heat and cold. Apparently the weather was the greater hazard as only one Pony Express rider was lost to the Indians.



New laws affecting fleet operation are summarized here for use as a guide only. Check the exact wording through your state truck or bus association, or your state's motor vehicle department, to see how the law affects your operation. The number in parentheses is the legislative bill you can use to identify the law.

Alaska—provides for identification of stated-owned vehicles and use of special plates (S159).

Kansas—increases amount of special assessment that may be made by PUC (S19), i.e. approved.



"No wonder they can quote the lowest prices of all the moving men in town"

New York—has entered into a reciprocity agreement with the state of Nebraska. Trailer combination vehicles with New York State registrations are required to display reciprocity plates.

Virginia—requires that name and address of owner appear on side of certain vehicles except those under 10,000-lb gross weight and those operated by private carriers (H136).



Berman's Express Co., Leechburg, Pa., honored 52 drivers for accidentfree driving records of from one to fourteen years.

Central Truck Lines, Fla., presented safe driving awards to 43 drivers at company safety meetings of various terminals.

H. W. Taynton Co., Wellsboro, Pa., (TURN TO NEXT PAGE, PLEASE)



If bus executives had to spend six to eight hours a day, five days a week, in the driver's seat, they would insist on an American Seating Model 300 Driver's Seat like this.

* S	SEATING
	American Seating Company Grand Rapids 2, Michigan
Please send me full int	formation on American Seating
☐ Driver's Seats ☐ Inter-City Seats	☐ City-Service (Transiter) Sea ☐ Suburban Seats
Name	
Title	
Company	
Street	
City	Zone State



Double Bottoms Need Heavy-Duty Tractors

Heavy-duty units are for double bottom operations by Spector Freight System, Chicago. These Macks are some of the 19 ordered by Spector, who also ordered 19 Internationals. Inspecting the 335-hp, twin screw, three axle tractors are, left to right, Charles Davidson, director of fleet maintenance; John Ferguson, vice pres.-equipment and maintenance; and C. L. Hunt, exec. vice pres.

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Continued from Page 407

announced its new safe driving incentive program. Drivers are being awarded certificates and pins for accident-free driving. Thirty-one drivers were honored to launch the new program.

Pearl Brewing Co., San Antonio, Texas, awarded medals and checks to 93 drivers for safety records through 1959. Tom Hall got top honors for 45 accident-free driving years with the company.



New York City Dept. of Sanitation is now using 30 new International Model No. CO-212 no-splash flushing trucks. Equipment includes 15 vertical-spray nozzles, 2500-gal tanks and pumping apparatus for 25-45-lb water pressure. Trucks can be equipped with snow-removal blades.

22

Russell Truck Co., Los Angeles, Cal., recently purchased eight 40-ft Fruehauf vans. The vans are specially built with in-the-van floor rollers. Loading is handled with fork lifts and pallets. Pallet load is pushed along the roller floor. Roller gates and folding legs permit pick up or delivery at dock or ground level.

Ringsby Truck Lines, Inc., Denver, Colo., has ordered 60 Highway Freightmaster truck-trailers. The order includes 50 closed-top and 10 open-top models. The 40-ft steel trailers have adjustable tandems, reinforced stake and panel sidewall construction and tongue-and-groove oak floors. Front-wall construction is reinforced for piggy-back operation. Closed-top models are steel-lined, open-top models are plywood-lined.

Matson Navigation Co., Wilmington, Cal., has taken delivery of a "Series 500 Van Carrier" from Clark Equipment Co. The straddle carrier is for carrying and tiering freight containers in containerized shipping. The 50,000-lb capacity unit stacks containers two high. It can drive straddle-fashion over a string of railroad flat cars to pick up a container from a middle car, and can transfer containers between railroad cars and flatbed highway trucks.

John Buckley & Co., Ltd., Warrington, England, has added an Atkinson rigid eight to its fleet of heavy-duty vehicles. Features of the new truck include fibreglas cab, automatic lubrication and 60 operational points. Fleet vehicles are all named after Royal Naval vessels; this one is the "Tiger."

Chicago, Burlington & Quincy Railroad ordered 300 forty-ft aluminum trailers from the Brown Trailer Div., Clark Equipment Co. The vans will be



Trailways "Super Golden Eagle"

Here is one of Trailways new "Super Golden Eagles" now in service in the West. The bus seats 63, has a rear game and observation lounge as well as rest room facilities. It has rubber springs and an hydraulic leveling device to prevent swaying. Overall length is 60 ft. Engine is a 275 hp supercharged Rolls-Royce. The bus itself is built in Germany.



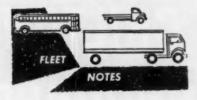
used for piggy-back and over-the-road service.

Los Angeles-Seattle Motor Express has ordered 15 Kenworth Model No. K-521 tractors. The units have tilting 73-in. COE sleeper cabs. They'll be used with 27-ft. trailers under the 65-ft length limit on the West Coast.

Interstate Motor Lines, Inc., Salt Lake City, Utah, has purchased 75 new automobiles for use by sales personnel. Purchase includes 40 Falcons, 27 Corvairs, 5 Fairlanes and 3 Biscaynes.

Ripley's, Inc., Topeka, Kan., is now

using six International MetroMites on local laundry and dry cleaning routes. The small multi-stop delivery units have 4-cyl, 51-hp engines and 200-cu ft capacity walk-in bodies. They're rated at 3800-lb GVW.



Bekins Van Lines Co. has been

awarded the contract for moving the U. S. Bureau of the Census. Materials will be hauled from warehouses to 347 field offices of the bureau, in preparation for this year's population inventory. Bekins' expansion program calls for offices in Boston, Philadelphia, Baltimore, Detroit, St. Louis, Norfolk and Pittsburgh by the end of next year.

Great Lakes Express Co. has installed a new telephone system at its terminals throughout Michigan and Ohio.

The General Services Administra-(TURN TO PAGE 412, PLEASE)



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NoSPIN differentials help maintain profitable fleet operation by eliminating costly wheel spin

NoSPIN directs all the available torque to the drive wheel having traction. It completely eliminates losses resulting from unnecessary tread wear. . . . delayed delivery schedules and shock-loading differential and drive-line parts when vehicle equipped with conventional differential becomes stuck in mud, snow, ice or sand. It helps the fleet operator to save on fuel, oil and maintenance.

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If you are a manufacturer searching for new talents and tools in your marketing operations, Chilton can put a wealth of manpower and a multiplicity of facilities to work for you. All Chilton publications have marketing data representing years of selling experience and research in their respective fields. And Chilton's fully staffed Research Department is equipped to help you develop additional data to give even better direction to your marketing plans.

Chilton's standards of editorial excellence and quality-controlled circulation in 17 business publications are now linked with stronger and more complete marketing information for advertisers. Chilton representatives will be glad to give you more details.

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Bruce Has New Freight Terminal

Bruce Motor Freight, Inc., has recently opened its new Twin Cities terminal in Roseville, Minn., near St. Paul. The building has 36 loading doors. A 55 x 246-ft area (not shown) is enclosed for loading and unloading with electrically-operated overhead doors and large maintenance shop. An electric conveyor system speeds up freight handling. An axle scale weighs vehicles. Pumps provide both gasoline and diesel fuel. Hydraulic dock plates automatically position themselves for movement of freight from dock to trailer. Lunch rooms are available for drivers and terminal personnel as well as a radio room and a "warm room" for protection of freezable merchandise.

April News Roundup

Continued from Page 409

tion, Washington, D. C., purchasing agent for the civilian agencies of the government, is trying out the compact cars. Orders have been placed for 340 Rambler "Americans" and 491 Studebaker-Packard "Larks."

Ringsby Truck Lines' Refrigerated Div., Denver, Colo., has appointed Bill Ingram as supervisor of safety and line dispatch. U. S. A. C. Transport, Inc., Detroit, is hauling a complete radar system from the General Electric Radar Antenna Test Site at Pittsfield, Mass., to a U. S. Air Force site near Cheyenne, Wyo. The move requires a convoy of six tractor-trailer sleeper units, preceded and followed by escort vehicles. The convoy will extend a distance of 1¼ miles. No traffic interference will be permitted. The 2200-mile trip will take from 10 days to three weeks, depending on weather conditions. Two-way radio communication has been established between all vehicles.

Veteran Cab Co., Memphis, Tenn., plans to replace all vehicles with Valiants. Three of the cars are in trial operation now.

Walgreen Drug Stores, national organization, announced the retirement of Max Backow, trucking supervisor, Chicago warehouse. He was with the firm forty years.

Railway Express Agency, Inc., announced appointments of six new executives in its nationwide system. Charles J. Lederer is executive director of transportation, in charge of containerization and piggy-back operations. Peter J. King is general manager of transportation, New York City. James C. Yarbrough is trans-



KAY-LAB DISABILITY FLASHER KIT

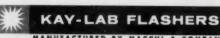
Protects standing vehicles

NOW you can also use your turning signals to flash emergency warning lights simply by installing low-cost Kay-Lab Disability Flasher Kit. Lights flash front and rear simultaneously; kit meets latest ICC requirements. Kits come complete, can be installed in minutes. Control switch clamps on – no holes to drill. Two types –

Heavy-Duty for trucks, trailers, earthmoving rigs; includes famous vibration-proof Universal Flasher, flashes up to sixteen 32-cp bulbs simultaneously, 75 times per minute. 6 and 12-volt models.

Regular-Duty for passenger cars and taxis; flashes up to six 21-cp lights, 90-100 times per minute...includes Kay-Lab Stop-It Flasher widely used on fire and police vehicles. 6, 12 and 24-volt models.

Unconditionally guaranteed. Order from your truck dealer or jobber, or write us for folders and prices.



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Any BANDAG Dealer Can Guarantee You Twice the Mileage from Truck Recaps

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- TIRES ARE NOT "BURNED UP"
- TIRES ARE NOT "BLOWN UP"

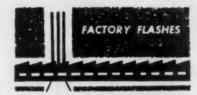
MANY BANDAG RECAPS RUN OVER 100,000 MILES ON DRIVE WHEELS



For name of nearest Bandag Dealer, call or write:

BANDAG, INC. C4 1056 Hershey Ave., MUSCATINE, IOWA TEL.: AMherst 3-3410 portation superintendent, Southern region. Gordon H. Graham is general superintendent of transportation, Mountain-Pacific region. Maynard M. Frank is general manager of transportation, San Francisco. Thomas W. Maguire is general superintendent of transportation, Western region.

Tamiami Freightways and Tamiami Trailways, Tampa, Fla., have appointed Fred W. Mills as director of safety



Fruehauf Trailer Co., Detroit, Mich., is constructing a plant at Uniontown, Pa., for the manufacture of tank trailers.

Marmon-Herrington Co., Inc., Indianapolis, Ind., has acquired the Oneida school bus body business of Henney Motor Co. Div., Eureka Williams Corp. Production will continue while the transfer from New York to Indiana is taking place.

Synthane Corp., Oaks, Pa., manufacturers of industrial laminated plastics, has new facilities in Glendale, Cal., to speed service to the West Coast.

Hackney Bros. Body Co., Wilson, N. C., appointed Emler Distributing Co., Louisville, Ky., as its factory representative in Kentucky, Indiana, Western Tennessee and Cincinnati,

Bendix Aviation Corp., South Bend, Ind., has adopted a new name which will go into effect about June 1, 1960. The Bendix Corporation" is a name better suited to the variety of products now being manufactured by the com-

Dayton Rubber Co., Dayton, Ohio, announced that its new corporate name is now The Dayco Corporation.



and driver training. He heads safety program planning for the nationwide Trailways systems.

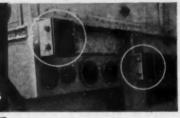
Brake Clinic



The group of fleet operators pictured, attended the Grey-Rock Brake Clinic sponsored recently by Perfection Equipment Co., Oklahoma City, Okla. The clinic was conducted by T. J. (Red) Gordon, Grey-Rock field engineer.

Prevent Truck Body And Dock Damage... **Protect Freight With**

NEW FLEX-O Rubber Truck Bumpers





FLEX-O truck bumpers are available in three styles for mounting on truck bed platforms and I.C.C. frames.

> Write for detailed literature.

■ Built for rugged service, the bumpers absorb the shock of truck-dock impact and reduce or eliminate truck down-time due to body damage sustained in colliding with loading docks.

Easily installed, the bumpers are made with a rubber coated fabric which can be reversed so that the life of the bumper can be doubled.

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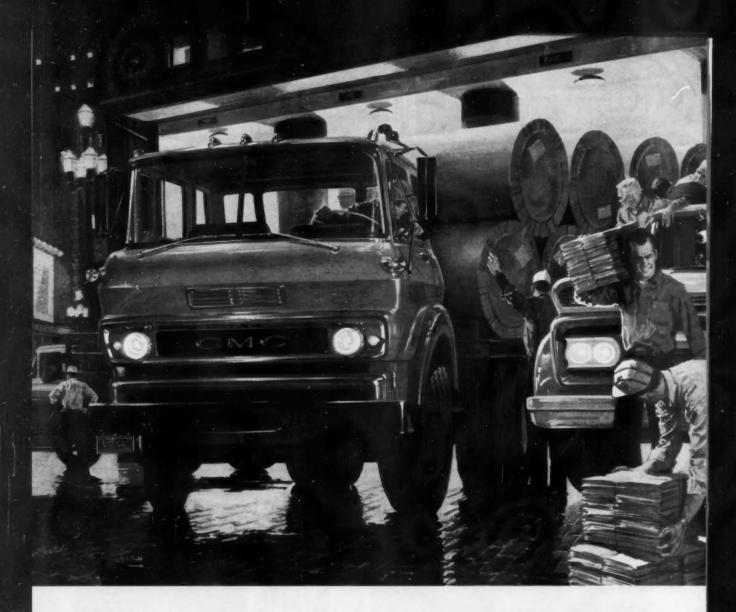
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FREE Service Manual	BACHARACH INDUSTRIAL INSTRUMENT COMPANY 7301 Penn Ave., Pittsburgh 8, Pa.
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saves time for bonus miles with all-new Rotary Valve Power Steering

Roll up those money-making miles . . . faster and easier than ever before . . . with GMC's big breakthrough in power steering.

One day with Rotary Valve Power Steering will prove the difference. It's easy to see you've made more miles, more stops, and more revenue with a whale of a lot less work. For Rotary Valve Power Steering reduces effort by as much as 70% . . . springs into action with a mere 11/2 degree turn of the wheel. As a result, you never need more than 8 to 11 lbs. of wheel effort even when parking or spotting a maximum pay load.

Think of the time saved at every stop. Add

up the time saved maneuvering through traffic. And count the extra miles driven at a stretch between rest breaks. They're extra minutes and they all add up to extra profits.

Best of all, Rotary Valve Power Steering is virtually maintenance-free. It's a system that's been proved through the last two years in over millions of highway miles.

Why not profit now from the more responsive, precise and dependable Rotary Valve Power Steering? Available on any GMC Truck of 2 tons and over, it's produced by the Saginaw Steering Gear Division of General Motors, Saginaw, Michigan.

GNC
GENERAL MOTORS
CORPORATION
TRUCKS

SEE YOUR GMC DEALER



(See also Fleetmen's Library on p. 84)

White truck service is explained in a pictorial story. It discusses the nationwide facilities for repair and adjustments of all White units and Cummins diesel engines. For free folder write to White Truck Div., White Motor Co., 842 E. 79th St., Cleveland 1, Ohio.

Unisteel van bodies are described and illustrated in an 8-pg color booklet. The "Cargo Engineered" steel and aluminum units are featured in four body types with many size choices. To obtain free booklet write to Unisteel Body Co., Galion, Ohio. Ask for Form No. VB-105.

"Standby Electric Plants and Controls—a Guide to their Selection and Installation" is the title of an 8-pg folder. It contains information on gasoline and diesel-powered generators and a list of Onan field engineers in the U. S. and Canada. For free copy write D. W. Onan & Sons, Inc., 2515 University Ave. S. E., Minneapolis 14, Minnesota. Ask for Sweet's File Folder No. 32C/ON.

Brochure compares fleet leasing with ownership of vehicles. All angles of the subject of leased vehicles and operating costs are discussed. For free copy write Lease Motor Vehicle Co., 5010 Liberty Ave., Pittsburgh 24, Pa.

Vertical motor-generator charger operation and maintenance instructions are available. Exide's new bulletin gives information on various models. Obtain a free copy from Exide Industrial Div., The Electric Storage Battery Co., Rising Sun and Adams Aves., Philadelphia 20, Pa. Ask for Form No. 5845.

Hanson-Whitney "Tap Selector" is a catalog containing charts, gages and prices of all types of taps. Selection and ordering of taps is made easier with data supplied. Free catalog is available from the Hanson-Whitney Co., 169 Bartholomew Ave., Hartford 2, Conn.

Allis-Chalmers construction machinery is described in four new pieces of color-illustrated literature. Catalog No. MS-1357 reviews the 340-hp motor scraper. New tractors are shown in Folder No. UT-116. The Model D motor grader and its accessories are discussed in Catalog No. MS-1319. Catalog No. MS-1322 features a 155-hp motor scraper. Get free literature from Construction Machinery Div., Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Emergency floodlights are illustrated in a 10-pg catalog from Stonco. The portable floodlights are of heavyduty, vaportight cast aluminum. For free catalog write Stonco Electric Products Co., 333 Monroe Ave., Kenilworth, N. J. Ask for Catalog H.

New 52-pg book describes Link-Belt spherical bearings. Diagrams, photographs and charts give information on shafts and bearings. Write Dept. PR, Link-Belt Co., Prudential Plaza, Chicago 1, Ill. Ask for Book 2760.

Highway safety equipment is shown in a catalog from Anthes. Flags, flares, fuses, lights, mirrors, reflectors and fire extinguishers are described. Obtain free catalog from The Anthes Co., Fort Madison, Iowa.

Hastings new service tool catalog illustrates and describes more than 70 tools. The line of engine repair tools is designed to speed operations and cut shop costs. Hastings distributors have free catalogs or write Hastings Mfg. Co., Hastings, Mich.

Aeroquip has a new industrial catalog. Products covered include hose, fittings, couplings and related products. Catalog is available with plastic binding or with a punched back for parts counter records book. Request Catalog No. 204 from Advertising Dept., Aeroquip Corp., Jackson, Mich.

New 20-pg catalog describes truck crane. The American "200 Series," 22½ ton crane is shown in detail. Get copy from American Hoist Distributors or write American Hoist & Derrick Co., St. Paul 7, Minn. Ask for Catalog No. 732-TG-2.

American 300 Series Crawler Crane-Excavator is illustrated in a 24-pg catalog. Copies may be obtained from American Hoist distributors or write American Hoist & Derrick Co., St. Paul 7, Minn.

The 1959 Battery Replacement Data Book is now available. Battery specifications for all makes and models of cars, trucks and buses are given. Obtain a copy from the Assn. of American Battery Manufacturers, 19 N. Harrison St., East Orange, N. J. Price: 60¢ per copy.

1959 Fourth Quarter Intercity Truck Tonnage

by Regions				by Commodifies			
Region	Fourth Quarter 1959*	Fourth Quarter 1956*	Per Cent Change	Commedity	Fourth Quarter 1959*	Fourth Quarter 1958°	Per Cent Change
New England Middle Atlantic Central Southern Northwestern Midwestern Southwestern Rocky Meuntain Pacific	4,957 18,610 25,008 11,989 4,660 6,613 7,031 3,097 10,321	4,963 18,137 24,415 11,337 4,756 5,840 7,034 2,846 8,173	- 0.5 + 2.6 + 2.4 + 5.7 - 2.0 +13.2 + 8.8 +12.5	General Freight Household Goods Heavy Machinery Liquid Putrolsum Refrigerated Liquids Refrigerated Solids Agricultural Commodities Motor Vehicles Building Materials Al Other	43,379 411 942 24,047 368 967 1,788 2,682 2,198 15,402	40,536 384 995 23,430 379 903 1,563 2,977 2,004 15,401	+ 7.0 + 7.2 + 8.3 + 2.6 - 2.8 + 18.1 - 3.2 + 8.5 - 0.5
United States	92,286	88,521	+ 4.3	Total	92,286	88,521	+ 4.3

^{*} In thousands of tens. Covering 2194 Class 1 and 2 intercity common and contract motor carriers of property as reported by American Trucking Assns. Recearch Dept. It does not represent total truck tennage.

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